

REMARKS

This amendment is offered in response to the Office Action of June 16, 2004.

The Office Action rejected Claims 1-19 under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 1-19 have been canceled, without prejudice or disclaimer, and replacement claims 20-38 have been presented which obviate the rejection under 35 U.S.C. §112.

The Office Action rejected Claims 1-5 and 17 under 35 U.S.C. §101, as non-statutory subject matter. More specifically, these claims were rejected as not having a “technological nexus”. Replacement claims 20-38 recite a “method of charge processing” or a “charge processing system” which defines a technological nexus.

Further, the Office Action rejected Claims 6-11 under 35 U.S.C. §101 for a claimed recitation of a use, without setting forth any steps involved in the process, resulting in a claim which is not a proper under 35 U.S.C. §101. In response, the applicant has presented replacement claims, in which “an identifier obtaining step” and “a formula obtaining step” are defined in order to clarify said “process.”

The Office Action rejected Claims 1, 2, 5 to 8, 10 to 14 and 17 to 19 under 35 U.S.C. §102(b) as being anticipated by the Reeder reference (U.S. Patent No. 5,832,812).

However, the Reeder reference discloses apparatus relating to charging for “online services” such as Compuserve or American Online (Column 1, line 26) and to charging for a server at a remote place from user (the office action pointed out that the Reeder reference relates to “online services”). Meanwhile, the presently claimed invention relates to charging for “electronic appliances”. Here, “electronic appliances” are directly used by a user.

In the 45th numbered paragraph of the present application as published (U.S. patent publication 2002/0055895 A1), it is disclosed that “the electronic appliance of this invention

includes an electronic appliance constituting a part of a multimedia terminal in addition to a multimedia terminal or the like.” An electronic appliance includes a screen display device, a disk as an accumulation medium, a remote controller button, VRAM (video RAM), a network interface, and the like of the multimedia terminal. Therefore, a “terminal” which is directly operated by a user is assumed as an “electronic appliance” of in the presently claimed invention. In this regard, the presently claimed invention is distinguishable from the Reeder reference.

Further, the Reeder reference (see col. 9, lines 66-67) discloses, “Billing events typically occur on either the application server 100 or gateway 12 (FIG. 2).” Therefore, a trigger for charging is not transmitted from the “terminal” of a “customer.” Meanwhile, as shown in Figs. 1, 3, 5, 7, 8, 11 and 13 of the present application, a trigger for charging is transmitted from the “electronic appliance.” Also, in so far as this point, the presently claimed invention is distinguishable from Reeder.

In order to clarify the differences between the presently claimed invention and Reeder, the applicant has submitted replacement claims wherein the “charging” or “computation of charge” is performed on the basis of “the information on usage transmitted from said electronic appliance.”

It is therefore respectfully submitted that the 35 U.S.C. §102(b) rejection under the Reeder reference is overcome.

The Office Action rejects Claims 3, 5, 9-11 and 15 under 35 U.S.C. §103(a) as being obvious over the Reeder reference.

However, as described hereinabove, the presently claimed invention is distinguishable from the Reeder reference. Therefore, if a “keyboard” is provided to the apparatus of the Reeder reference, it will be different from the presently claimed invention. Moreover, if “automatic

sight-on” is provided to the apparatus of Reeder, it will be distinguishable from the presently claimed invention.

It is therefore respectfully submitted that Claims 3, 5, 9-11 and 15 are patentable over the Reeder reference.

The Office Action rejected Claims 12-16 under 35 U.S.C. §103(a) under 35 U.S.C. §103(a) as being obvious over the Block reference (U.S. Patent No. 5,960,416).

However, as described in the Block reference (col. 4, lines 59-65), the Block reference discloses an apparatus in which a user can know the amount of charge in real time by receiving a “cost signal,” which has been generated, from the external devices (e.g. Network Routing Devices). In contrast, the objective of the presently claimed invention is not to know the amount of charge in real time, and as such it does not have a configuration for implementing said objective. Hence, if the Block reference has an objective of “providing a plurality of services,” the configuration thereof will be distinguishable from that of the presently claimed invention.

It is therefore respectfully submitted that Claims 12-16 are patentable over the Block reference.

The Office Action rejected Claims 1, 2, 4 and 5 under 35 U.S.C. §103(a) as obvious over the Griffin reference (U.S. Patent No. 5,893,077) and Google Group printout.

However, Griffin reference and Google Group printout relate to charging for use of a server at a remote place from a user. Hence, as described in comparison with the Reeder reference, these references are distinguishable from the presently claimed invention.

For all of the reasons above, it is respectfully submitted that all of the presently pending

claims are in immediate condition for allowance. The Examiner is respectfully requested to withdraw the rejections of the claims, to allow the claims, and to pass this application to early issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerald Levy", written over the printed name.

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ACCOUNTING PROCESSING METHOD
METHOD OF CHARGE PROCESSING

BACKGROUND OF THE INVENTION

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GROUP 3600

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[0001] 1. Field of the Invention

10 [0002] ~~The present invention relates to an accounting processing method for a service that is realized by an electronic appliance. Specifically, the present invention relates to an accounting processing method for a partial usage of the electronic appliance such as a usage of a function, an operating button and an accumulation medium of the electronic appliance.~~

15 [0002] The present invention relates to a method of charge processing for services realized by an electronic appliance. In particular, the present invention relates to a method of charge processing for the partial use of an electronic appliance, such as use of a function, an operation button or storage media of an electronic appliance.

[0003] 2. Description of the Related Art

20 [0004] ~~Conventionally, there have been no accounting processing method for a partial usage of the electronic appliance. A service by use of the electronic appliance will be briefly explained below. Additionally, it will be described how the accounting processing of this service has been conventionally provided.~~

25 [0004] In the past, there was no method of charge processing for the partial use of an electronic appliance. Below is described various types services realized or implemented by an electronic appliance. Moreover, a conventional method of charge processing for such services will be described below.

30 [0005] ~~Conventionally, a service by use of the electronic appliance has been provided. For~~

example, as shown in FIG. 4, a service provider, i.e., a service providing agent has provided a TV broadcast, a rental video program, a rental DVD and a rental CD. Further, in the Internet, an Internet service provider or the like has provided the connection to the Internet with charge, has provided the information via a portable telephone, a PDA and a car navigation or the like and provided a game program through a communication line.

[0005] From the past, services have been provided by use of an electronic appliance. For example, as shown in FIG. 4, service providers have been providing fee-based TV broadcasting, and rental services for videos, DVD's and CD's. Further, Internet service providers or the like have been providing Internet connections; information services via cellular phones, PDA's, car navigations or the like; and online games.

[0006] The accounting processing method is as follows. In the case of a pay television or the like, a monthly audience fee was fixed in advance for the accounting processing. In the case of a rental video program or the like, the fee was accounted at a counter of a rental video program shop when a rental service was provided. In the case of the information service via the portable telephone or the like, a communication agent integrally charges the information fee and the communication fee for each service, which is designated by the service provider to collect the fee from a user in place of an information provider.

[0006] The conventional method of charge processing is as follows: In the case of pay television or the like, a monthly TV subscription fee is fixed in advance for charge processing. In the case of video rentals, the fee is charged over the counter at the time of the rental. In the case of information service providers via cellular phones or the like, a common carrier charges a communication fee together with the respective information fee, which is designated by the information service provider, and collects the fee from the user as an agent of such information service provider.

SUMMARY OF THE INVENTION

~~[0007] According to a conventional accounting processing method, the respective service providers charge a fee for each service. In the case of an interactive multimedia service terminal or the like for customizing a plurality of services for each service terminal, many kinds of accounting processing are needed for one service terminal, so that the accounting processing becomes complicated.~~

[0007] According to the conventional method of charge processing, the respective service provider charges a fee for each of its services. In the case of an interactive multimedia service terminal or the like having plurality of services customized to each service terminal, many types of charge processing are needed for one service terminal so that charge processing in itself becomes rather complicated.

~~[0008] Conventionally, it is necessary to perform the accounting processing according to various services, for example, a telephone service, Internet service, a general television broadcast, a video-on-demand system, a news-on-demand system, a music-on-demand system, an on-line shopping, a telecommunication karaoke, an electronic money payment, a home banking, an electronic commerce (EC), a home trade, a home medical care system, a telecommunication game, multimedia newspaper and a public service such as issue of a resident card or the like through one multimedia terminal. Therefore, it was difficult for a conventional accounting processing method to effectively treat the accounting processing of various services.~~

[0008] In the past, it was necessary to carry out charge processing as per type of services on a multimedia terminal, i.e., per type of services such as telephone, Internet, television, video-on-demand, news-on-demand, music-on-demand, online shopping, online karaoke, electronic settlement, home banking, electronic commerce, home trade, home medical care, online games, multimedia newspapers, and public services such as issuance of residence cards. Accordingly, it was rather difficult for the conventional method of charge processing to effectively process these services.

[0009] ~~Further, as an entity for providing one service, a content provider, a communication agent and a device provider and the like are considered. However, it was difficult to distribute a profit from a service fee in compensation for the service for each service providing entity. Further, it was difficult for an advertising agent to install a reproduction apparatus, a function and a~~
5 ~~button for a commercial message only in a home.~~

[0009] Moreover, where there are content providers, a common carrier, and a device provider, and the like, each providing services, it was difficult to divvy up the profit from the service charge collected for such services according to the respective types of service providers. Further,
10 it was difficult for advertisers to install dedicated playback devices for commercials, or to install dedicated functions or buttons on electronic appliances for commercials in a household environment.

[0010] ~~In order to solve these problems, the present invention provides an accounting processing method for performing an accounting processing by using a calculation formula to calculate the charged fee according to the usage of a function of an electronic appliance for realizing a service, an operating button thereof and an accumulation medium thereof or the like.~~
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[0010] In order to solve these problems, the present invention provides a method of charge processing by means of using a computation formula to compute the charge according to the use
20 of a function on an electronic appliance for realizing the service by a user, the use of an operation button on an electronic appliance, and the use of storage media of an electronic appliance.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] ~~FIG. 1 illustrates an accounting processing method by the use of a calculation formula for calculating the accounting fee for the usage of an electronic appliance according to the present invention.~~
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[0011] FIG. 1 illustrates a method of charge processing according to the present invention,
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which uses a computation formula for computing the charge for the use of an electronic appliance.

~~[0012] FIG. 2 shows a flow for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of an electronic appliance according to the present invention.~~

[0012] FIG. 2 is a flowchart for the method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an electronic appliance.

~~[0013] FIG. 3 illustrates an accounting processing apparatus for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of an electronic appliance according to the present invention and a function of an electronic appliance associated with this accounting processing apparatus.~~

[0013] FIG. 3 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for calculating the charge for the use of an electronic appliance.

~~[0014] FIG. 4 is a conceptual diagram for illustrating a service to be realized by an electronic appliance.~~

[0014] FIG. 4 is a conceptual diagram for illustrating various types of services realized by an electronic appliance.

~~[0015] FIG. 5 illustrates an accounting processing method by the use of a calculation formula for calculating the accounting fee for the usage of a function according to the present invention.~~

[0015] FIG. 5 illustrates a method of charge processing according to the present invention,

which uses a computation formula for computing the charge for the use of a function of an electronic appliance.

~~[0016] FIG. 6 shows a flow for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of a function according to the present invention.~~

[0016] FIG. 6 is a flowchart of the method of charge processing according to the present invention, by uses a computation formula for computing the charge for the use of a function of an electronic appliance.

~~[0017] FIG. 7 illustrates an accounting processing apparatus for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of a function according to the present invention and a function of an electronic appliance associated with this accounting processing apparatus.~~

[0017] FIG. 7 illustrates a charge processing apparatus and the functions thereof according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of a function.

~~[0018] FIG. 8 illustrates an accounting processing method by the use of a calculation formula for calculating the accounting fee for the usage of an operating button according to the present invention.~~

[0018] FIG. 8 illustrates a method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an operation button of an electronic appliance.

~~[0019] FIG. 9 shows a flow for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of an operating button according to the~~

~~present invention.—~~

[0019] FIG 9 is a flowchart of the method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an operation button of an electronic appliance.

~~[0020] FIG 10 illustrates an accounting processing apparatus for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of an operating button according to the present invention and a function of an electronic appliance associated with this accounting processing apparatus.—~~

[0020] FIG 10 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of an operation button on an electronic appliance.

~~[0021] FIG 11 illustrates an accounting processing method for performing the accounting processing by the use of a calculation formula for calculating the accounting fee for the usage of an accumulation medium according to the present invention.—~~

[0021] FIG 11 illustrates a method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of storage media of an electronic appliance.

~~[0022] FIG 12 shows a flow for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage of an accumulation medium according to the present invention.—~~

[0022] FIG 12 is a flowchart for carrying out charge processing according to the present invention by means of using a computation formula for computing the charge for the use of storage media of an electronic appliance.

~~[0023] FIG. 13 illustrates an accounting processing apparatus for performing the accounting processing by using a calculation formula for calculating the accounting fee for the usage an accumulation medium according to the present invention and a function of an electronic appliance associated with this accounting processing apparatus.~~

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[0023] FIG. 13 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of storage media of an electronic appliance.

10 ~~[0024] FIG. 14 illustrates a parameter of a calculation formula for calculating the accounting fee for the usage of a function of an electronic appliance, a button of an electronic appliance and a disk of an electronic appliance according to the present invention.~~

15 [0024] FIG. 14 shows parameters for a computation formula for computing the respective charge for the use of a function of an electronic appliance, the use of a button of an electronic appliance, and the use of a disk of an electronic appliance according to the present invention.

20 ~~[0025] FIG. 15 illustrates an accounting processing method for charging a manager of an electronic appliance by the use of a calculation formula for calculating the accounting fee for the setting of an electronic appliance according to the present invention.~~

25 [0025] FIG. 15 illustrates a method of charge processing in respect to an administrator according to the present invention, which uses a computation formula for computing the charge for the installation of an electronic appliance.

~~[0026] FIG. 16 shows a flow of an accounting processing method for charging a manager of an electronic appliance with the accounting fee for setting of the electronic appliance according to the present invention.~~

30 [0026] FIG. 16 is a flowchart of charge processing according to the present invention, which

computes the charge for the installation of an electronic appliance in respect to an administrator of an electronic appliance.

~~[0027] FIG. 17 illustrates an accounting processing apparatus for calculating the accounting fee for the setting of an electronic appliance and charging a manager of an electronic appliance and a function of an electronic appliance associated with this accounting processing apparatus according to the present invention.~~

[0027] FIG. 17 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by computing the charge for the installation of an electronic appliance in respect to an administrator of an electronic appliance.

~~[0028] FIG. 18 illustrates an accounting processing method for calculating the accounting fee for embedding of a function of an electronic appliance and charging a manager of an electronic appliance according to the present invention.~~

[0028] FIG. 18 illustrates a method of charge processing according to the present invention, which computes the charge for a built-in function of an electronic appliance in respect to an administrator of an electronic appliance.

~~[0029] FIG. 19 shows a flow of an accounting processing method for calculating the accounting fee for the embedding of a function of an electronic appliance and charging a manager of an electronic appliance according to the present invention.~~

[0029] FIG. 19 is a flowchart of charge processing according to the present invention, which computes the charged for a built-in function of an electronic appliance in respect to an administrator.

~~[0030] FIG. 20 illustrates an accounting processing apparatus for calculating the accounting fee for embedding of a function of an electronic appliance and charging a manager of an electronic~~

~~appliance and a function of an electronic appliance associated with this accounting processing apparatus according to the present invention.~~

[0030] FIG 20 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of computing the charged for a built-in function of an electronic appliance in respect to an administrator of an electronic appliance.

~~[0031] FIG 21 illustrates an accounting processing method for calculating the accounting fee for the setting of a button and charging a manager of an electronic appliance according to the present invention.~~

[0031] FIG 21 illustrates a method of charge processing according to the present invention, which carries out charge processing by means of computing the charged for the installation of a button in respect to an administrator of an electronic appliance.

~~[0032] FIG 22 shows a flow of an accounting processing method for calculating the accounting fee for the setting of a button and charging a manager of an electronic appliance according to the present invention.~~

[0032] FIG 22 shows a flowchart of a method of charge processing according to the present invention, which computes the charge for the installation of a button of an electronic appliance in respect to an administrator of an electronic appliance.

~~[0033] FIG 23 illustrates an accounting processing apparatus for calculating the accounting fee for the setting of a button and charging a manager of an electronic appliance or a remote controller and a function of a remote controller associated with this accounting processing apparatus according to the present invention.~~

[0033] FIG 23 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of computing the charged for the installation of a

button in respect to an administrator of an electronic appliance or a remote controller.

~~[0034] FIG. 24 illustrates an example of a function block of an accounting processing system according to the present invention.~~

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[0034] FIG. 24 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

~~[0035] FIG. 25 shows a flow of an accounting processing of an accounting processing system according to the present invention.~~

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[0035] FIG. 25 is a flowchart of one embodiment of a charge processing system according to the present invention.

~~[0036] FIG. 26 illustrates an example of a function block of an accounting processing system according to the present invention.~~

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[0036] FIG. 26 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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~~[0037] FIG. 27 shows an example of a flow of an accounting processing of an accounting processing system according to the present invention.~~

[0037] FIG. 27 is a flowchart of one embodiment of a charge processing system according to the present invention.

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~~[0038] FIG. 28 illustrates an example of a function block of an accounting processing system according to the present invention.~~

[0038] FIG. 28 is a functional block diagram of one embodiment of a charge processing system

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according to the present invention.

~~[0039] FIG. 29 shows an example of a flow of an accounting processing of an accounting processing system according to the present invention.~~

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[0039] FIG. 29 is a flowchart of one embodiment a charge processing system according to the present invention.

~~[0040] FIG. 30 illustrates an example of a function block of an accounting processing system according to the present invention.~~

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[0040] FIG. 30 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

~~[0041] FIG. 31 illustrates an example of a function block of an accounting processing system according to the present invention.~~

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[0041] FIG. 31 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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~~[0042] FIG. 32 illustrates an example of a function block of an accounting processing system according to the present invention.~~

[0042] FIG. 32 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

~~[0043] As an accounting processing method for a service to be realized by the electronic appliance, a method in the case of charging the fee for the usage of the electronic appliance itself,~~

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~~a method in the case of charging the fee for the usage of a function of the electronic appliance, a method in the case of charging the fee for the usage of a button to operate the electronic appliance and a method in the case of charging the fee for the usage of a disk to serve as an information accumulation medium of the electronic appliance and the like are considered.~~

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[0043] A method of charge processing for services realized by an electronic appliance may be applicable to the following cases of: (1) charging a fee for the use of an electronic appliance; (2) charging a fee for the use of a function of an electronic appliance; (3) charging a fee for the use of an operation button of an electronic appliance; and (4) charging a fee for the use of a disk, which is an information storage medium of an electronic appliance.

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~~[0044] Further, there is a case that a fee is charged in compensation of lending of the electronic appliance in addition to a case that a fee is charged in compensation of a service itself. This case is applied to a case that an agent for providing a service is charged. In the case that an electronic appliance, a function of the electronic appliance, an operating button for operating the electronic appliance and a disk which is an accumulation medium of the electronic appliance are lent to the agent for providing a service and the agent freely customizes them according to the service that the agent provides to have the service offering means for an end user, it is convenient to charge the agent for offering a service in compensation for lending them.~~

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[0044] Further, there is the case of charging a fee for the rental of an electronic appliance in addition to the case of charging a fee for the service in itself. This is the case of charging a fee in respect to a service provider, wherein said service provider leases an electronic appliance, a function of an electronic appliance, an operation button for operating an electronic appliance, and/or a disk, which is a storage medium of an electronic appliance. Then, the service provider customizes them at its discretion according to the services so provided by a means for providing services to a terminal user. In this case, it is convenient to charge the service provider for such rental.

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~~[0045] At first, an embodiment according to the present invention for charging for the usage of~~

the electronic appliance will be described below. FIG. 1 illustrates a structure of an accounting processing method of this invention. The electronic appliance of this invention includes an electronic appliance constituting a part of a multimedia terminal in addition to a multimedia terminal or the like. The electronic appliance constituting a part of a multimedia terminal includes "a screen display device", "a disk as an accumulation medium", "a remote controller button", "VRAM (video ram)" and "a network interface" and the like of the multimedia terminal. Further, the network interface includes a modem such as an Ethernet interface, a V90 modem and the like, an IEEE 1394 interface, a DV (digital video) terminal and a SD card interface and the like. That is because these can provide discriminating service. Additionally, this accounting processing method has calculation formula storage means and an accounting fee calculation step. The "calculation formula storage means" stores a calculation formula for calculating an accounting fee for the usage of the electronic appliance. In this case, one calculation formula or plural calculation formulas may be applied. Additionally, the calculation formula can be easily changed or replaced by an electronic processing. A type of the calculation formula is selected according to a service to be provided by the electronic appliance. If a person to provide the electronic appliance and a person to perform the accounting processing are the same, it is possible to easily know what service has been realized and provided in each electronic appliance and how the electronic appliance has been used. Further, even if they are different, it is possible to know what service is realized and provided in each electronic appliance and how the electronic appliance is used in advance upon performing the electronic processing or performing the accounting processing by communication. Accordingly, the calculation formula is easily selected.

[0045] First, below is described an embodiment according to the present invention, which carries out charge processing for the use of an electronic appliance. FIG. 1 illustrates a structure of a method of charge processing according to the present invention. An electronic appliance of the present invention includes a multimedia terminal or the like, and an electronic appliance comprising a part of a multimedia terminal. An electronic appliance comprising a part of a multimedia terminal includes a screen display device, a disk as a storage medium, a remote controller button, VRAM (Video RAM), a network interface, or the like of a multimedia terminal. Further, a network interface includes a modem such as an Ethernet interface, a V90 modem and

the like, an IEEE 1394 interface, a DV (Digital Video) terminal, a SD card interface and the like.
By using these apparatuses or devices, differentiated services can be so provided. Further, the
method of charge processing according to the present invention comprises a means for storing
computation formulas, and a step of computing a charge. The means for storing computation
5 formulas stores a computation formula for computing the charge for the use of an electronic
appliance. There may be one or more computation formulas. Further, it may be easily changed
or substituted by means of an electronic process. A computation formula to be used herein is
selected according to the service provided by an electronic appliance. If the electronic appliance
provider, and the charge processor are the same entity, information is readily available in respect
10 to what services have been realized and provided to each electronic appliance, and how the
electronic appliance has been used. Further, even if they are different, information is obtainable
in respect to what services are realized and provided to each electronic appliance, and how the
electronic appliance is used in advance by carrying out electronic processing or charge processing
via online. Accordingly, it is rather easy to select an appropriate computation formula.

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~~[0046] According to the "accounting fee calculation step", the accounting fee is calculated on~~
~~the basis of the calculation formula that is stored in this calculation formula storage means. In~~
~~this case, one calculation formula or plural calculation formulas may be used. Further, according~~
~~to the calculation formula to be used, information on the usage of the electronic appliance is~~
20 ~~employed.~~

[0046] The step for computing a charge computes a charge on the basis of the computation
formula stored in the means for storing computation formulas. One or more of computation
formulas may be used herein. Further, depending on the need of the computation formula used,
25 the information relating to the use of an electronic appliance may also be used therein.

~~[0047] For example, in the case that the electronic appliance comprises a "screen display~~
~~device", a specific parameter to be used in the calculation formula includes a place where the~~
~~screen to be used is located, a size thereof and an order that the information to be displayed on~~
30 ~~the screen is arranged and the like. In the case that the electronic appliance is an "accumulation~~

medium", a specific parameter to be used in the calculation formula is a usage capacity. If the electronic appliance is a "remote controller operating button", a specific parameter to be used in the calculation formula includes a place of the button to be arranged on the remote controller and a size of the button and the like. If the electronic appliance is a "VRAM", a specific parameter to be used in the calculation formula is a size thereof or the like. If the electronic appliance is a "network interface", a specific parameter to be used in the calculation formula includes a kind thereof and a transmission rate thereof and the like. The network interface also includes a function for performing an encryption processing. In this case, a specific parameter to be used in the calculation formula is whether this function should be used or not. Further, the number of the electronic appliances to be used by connecting it to the interface is also used as a parameter of the calculation formula.

[0047] For example, if the electronic appliance is a screen display device, the specific parameters used in the computation formula include information relating to the location of the screen being used, the size thereof, the arrangement sequence of information displayed on the screen, and the like. If the electronic appliance is a storage medium, the specific parameters used in the computation formula include information on the amount of use. If the electronic appliance is an operational button on a remote controller, the specific parameters used in the computation formula include information relating to the location of the button on the remote controller, the size of the button, and the like. If the electronic appliance is a VRAM, the specific parameters used in the computation formula include information relating to the size thereof and the like. If the electronic appliance is a network interface, the specific parameters used in the computation formula include information on its type, the transmission rate thereof, and the like. If the network interface also has an encryption capability, the specific parameters used in the computation formula include a flag as to whether encryption is used or not. Further, the number of electronic appliances, which is used as such by way of connection to the interface, is also used as a parameter in the computation formula.

[0048] FIG. 2 is a flow chart for illustrating an example of a flow of this processing. At first, waiting until the information for accounting processing is inputted (S201), if it is inputted, then,

~~the information on the usage of the electronic appliance is obtained (S202). Further, this information on the usage of the electronic appliance is not always needed. In the case that this information on the usage of the electronic appliance that realizes the service as an object of the accounting processing is uniformed, it is also possible to select the calculation formula and to perform the accounting processing without using this information in the accounting fee calculation step by use of this calculation formula.~~

[0048] FIG. 2 is a flowchart of one embodiment according to the present invention. At first, the process involves waiting until the information for charge processing is inputted (S201). If it is inputted, then the information relating to the use of an electronic appliance is obtained (S202). Nevertheless, the information relating to the use of the electronic appliance is not always needed. If the information relating to the use of an electronic appliance is standardized, it is possible to select a computation formula and to carry out charge processing without using this information in the step of computing the charge using said calculation formula.

~~[0049] By using this information or the like, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S203). Then, on the basis of the calculation formula that is taken out in the above step and the information, the accounting fee is calculated (S204).~~

[0049] By using this information or the like, a computation formula is extracted from the means for storing computation formulas, with which computes the charge for the use of an electronic appliance (S203). On the basis of the computation formula extracted in the above step and the above information, the charge is then computed (S204).

~~[0050] FIG. 3 illustrates an example of a function block of an accounting processing apparatus 302 for performing this accounting processing. As shown in FIG. 3, information on the usage of the service realized by an electronic appliance 301 is transmitted from a transmission unit 303 which is provided in the electronic appliance 301 to the accounting processing apparatus 302 side.~~

~~In the accounting processing apparatus 302, a reception unit 304 receives this information on the usage of the service realized by an electronic appliance 301. On the basis of this information, calculation formula obtaining means 307 of an accounting fee calculation processing unit 306 obtains an optimum calculation formula from a calculation formula storage unit 305 and performs an arithmetical processing by using this calculation formula at the accounting fee calculation processing unit 306 to calculate the accounting fee. A subject to be an accounting object is specified and the payment processing with respect to the calculated accounting fee is carried out in practice by a method such as an electronic money payment or the like. Further, the accounting fee and the information to be used to calculate the accounting fee are transmitted to the subject of the accounting object through an electronic mail or the like.~~

[0050] FIG. 3 is a functional block diagram of one embodiment of a charge processing apparatus 302 according to the present invention. As shown in FIG. 3, the information relating to the use of the service realized by an electronic appliance 301 is transmitted from a transmission unit 303, which is provided in the electronic appliance 301, to the charge processing apparatus 302. In the charge processing apparatus 302, a reception unit 304 receives this information relating to the use of the service realized by an electronic appliance 301. On the basis of this information, the means for obtaining a computation formula 307 in the charge computation processor 306 acquires the optimum computation formula from the storage unit 305 for computation formulas, and carries out arithmetical processing by using this computation formula at the charge computation processor 306 in order to compute the charge therein. A user (chargee) for the charging purposes is specified, and the payment is processed in respect to the computed charge by means of a payment method such as electronic settlement. Further, the charge amount, and the information used in computing the charge are transmitted to the chargee via e-mail or the like.

~~[0051] Thus, the accounting processing is easily electronically performed, so that it becomes possible that the accounting processing is performed everyday or hourly instead of once per month. Accordingly, it is possible to perform the accounting processing according to update and change of the service that is provided by the electronic appliance.~~

[0051] Thus, the present invention enables charge processing, which can be easily carried out electronically, thereby enabling daily or hourly charge processing instead of conventional monthly processing. Accordingly, the present invention enables charge processing in accordance with the updates and changes in services so provided by an electronic appliance.

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~~[0052] Next, a case that the accounting fee is charged for the use of a function of an electronic appliance will be explained. According to this invention, compensation for the service that is realized by using the function belonged to the electronic appliance is treated by the accounting fee for the use of the function.~~

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[0052] Below is described an embodiment for charge processing for the use of a function of an electronic appliance. According to the present invention, the charge for the service realized by using the function of the electronic appliance is processed according to the charge for the use of such function.

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~~[0053] FIG. 5 illustrates an example of this invention. The accounting processing method according to this invention also has calculation formula storage means and an accounting fee calculation step. This invention is characterized in that the calculation formula that is stored in this calculation formula storage means is the means to calculate the accounting fee for the use of one function realized by the electronic appliance. As shown in the example of FIG. 5, assuming that the electronic appliance has functions 1 to 3, if a person who received the service by this electronic appliance receives the service by the function 2, the accounting fee is charged for the usage of the function 2. The "function" is means for realizing the service that is provided through this electronic appliance. For example, various services such as a telephone service, Internet service, a general television broadcast, a video on demand system, a news on demand system, a music on demand system, an on line shopping, a telecommunication karaoke, an electronic money payment, a home banking, an electronic commerce (EC), a home trade, a home medical care system, a telecommunication game, a multimedia newspaper and a public service such as issue of a resident card and the like are provided in the electronic appliance, so that it is possible to receive these services by using the function.~~

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[0053] FIG. 5 illustrates an embodiment of a method of charge processing according to the present invention. The method of charge processing according to the present invention comprises a means for storing computation formulas, and a step of computing a charge. The embodiment is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, serves as a means to compute the charge for the use of a function realized by an electronic appliance. As shown in FIG. 5, assuming that the electronic appliance has Functions 1 to 3, if a user receiving the service by this electronic appliance receives the service by way of Function 2, the charge is processed for the use of Function 2. A function is a means for realizing the service provided through this electronic appliance. An electronic appliance is equipped with functions providing various types of services, such as telephone, Internet, television, video-on-demand, news-on-demand, music-on-demand, on-line shopping, online karaoke, electronic settlement, home banking, electronic commerce, home trade, home medical care, online game, multimedia newspapers, and public services such as issuance of residence cards. Hence, an user can receive these types of services by the above functions for example.

[0054] ~~In this case, as a specific example of the calculation formula, there are considered a case that the accounting fee is 50 yen in the case of using a telecommunication karaoke of the function 1, a case that the accounting fee is 20 yen in the case of using an electronic money payment of the function 2, and a case that the accounting fee is 30 yen in the case of using a home banking of the function 3.~~

[0054] In this case, as a specific example of a computation formula, 50 Yen may be charged for the use of online karaoke of Function 1, 20 Yen for the use of electronic settlement of Function 2, and 30 Yen for the use of home banking of Function 3.

~~[0055] It is assumed that a person who uses the electronic appliance realize, for example, a service such as a video on demand system by the function 2 shown in FIG. 5 and enjoys it. In this case, according to the accounting processing method, as shown in FIG. 5, on the basis of the calculation formula for calculating the accounting fee for the usage of the function 2 by the calculation formula storage means of the accounting processing method, the accounting fee in~~

~~compensation for the service such as a video-on-demand system is calculated. On the basis of the calculation formula that is stored in the calculation formula storage means, the accounting fee is calculated in the accounting fee calculation step.~~

5 [0055] It is assumed that a user of an electronic appliance implements for enjoyment a service such as video-on-demand by means of Function 2 as shown in FIG. 5. In this case, as shown in FIG. 5, on the basis of the computation formula for computing the charge for the use of Function 2 obtained from the means for storing computation formulas, the method of charge processing computes the charge for the service such as for video-on-demand. On the basis of the
10 computation formula stored in the means for storing computation formulas, the charge is computed in the step of computing the charge.

~~[0056] In this case, the functions 1 and 3 are not used, so that they are not the accounting objects. FIG. 6 shows a flow of the processing according to this invention. Waiting until the~~
15 ~~information for accounting processing is inputted (S601), if it is inputted, then, the information on the usage of the electronic appliance is obtained (S602). The "information on the usage of the electronic appliance" includes the information on the function that is used by the electronic appliance. Then, a function identifier for identifying the used function is obtained (S603). This function identifier is used for associating the used function with the calculation formula for~~
20 ~~calculating the accounting fee for the usage of the function. Then, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S604). Then, on the basis of the calculation formula that is taken out in the above step and the information, the accounting fee is calculated (S605).~~

25 [0056] In this case, Functions 1 and 3 are not used, so that they are not the objects of charge. FIG. 6 is a flowchart of an embodiment according to the present invention. The method involves waiting until there is an input for charge processing (S601), and upon input, the information relating to the use of an electronic appliance is obtained (S602). The information relating to the
30 use of an electronic appliance includes information relating to the function used by the electronic

appliance. Then, a function identifier for identifying the used function is obtained (S603). This function identifier is used for associating the used function with the computation formula for computing the charge for the use of said function. Next, the corresponding computation formula, which computes the charge for the use of said electronic appliance, is extracted from the means
5 for storing computation formulas (S604). Then, on the basis of the computation formula extracted in the above step, and the information relating to said use, the charge thereof is computed (S605).

~~[0057] Further, in the case that a plurality of functions are used, the accounting fee may be
10 calculated by using a plurality of calculation formulas, or by using the calculation formula which is predetermined for the usage of a plurality of functions. FIG. 7 illustrates a function of an electronic appliance 701 and a function of an accounting processing apparatus 702. As shown in FIG. 7, the electronic appliance 701 has a plurality of functions for realizing a plurality of services, for example, three functions 703, 704 and 705 from the function 1 to the function 3. Further, the electronic appliance 701 has a transmission unit 706 for transmitting the information
15 on the usage of the electronic appliance 701 including the usage of the function to the accounting processing apparatus 702.~~

[0057] Further, if a plurality of functions is used, the charge may be computed by using a
20 plurality of computation formulas, or by using a computation formula predetermined for the purposes for the use of a plurality of functions. FIG. 7 illustrates the functions of an electronic appliance 701, and the charge processing apparatus 702. As shown in FIG. 7, the electronic appliance 701 has a plurality of functions for implementing a plurality of services, i.e., Functions 1 to 3 (703, 704 and 705). Further, the electronic appliance 701 has a transmission unit 706 for
25 transmitting information relating to the use of an electronic appliance 701, including that relating to the use of the functions, to the charge processing apparatus 702.

~~[0058] As shown in FIG. 7, the accounting processing apparatus 702 according to this invention has a reception unit 707 for receiving the information on the usage of the electronic appliance
30 701. On the basis of the information on the usage of the electronic appliance 701 that is received~~

~~this reception unit 707, calculation formula obtaining means 710 of an accounting fee calculation processing unit 709 selects the calculation formula for calculating the accounting fee for the usage of the function from a calculation formula storage unit 708.~~

5 [0058] As shown in FIG. 7, the charge processing apparatus 702 according to the present invention comprises a reception unit 707 for receiving information relating to the use of an electronic appliance 701 from the electronic appliance 701. On the basis of the information relating to the use of an electronic appliance 701 received by the reception unit 707, the means 710 for obtaining a computation formula in the charge computation processor 709 selects the
10 computation formula for computing the charge for the use of the function from the storage unit 708 for computation formulas.

~~[0059] Additionally, the transmission unit 706 of the electronic appliance 701 and the reception unit 707 of the accounting processing apparatus 702 are not always required to directly receive~~
15 ~~the information, they may receive indirectly receive the information. Further, the information on the usage of the electronic appliance 701 that is transmitted from the transmission 706 of the electronic appliance 701 may be transmitted to the accounting processing apparatus 702 without being processed or it may be transmitted to the accounting processing apparatus 702 after the necessary information is processed. The "necessary information processing" means various~~
20 ~~information on a person who receives the service by the electronic appliance 701 and the information on the number of referring to a banner advertisement or the like. It is also possible to determine the accounting fee by using these information upon the accounting processing. In response to the number of referring to a banner advertisement, it is possible to change the price reduction rate and the price reduction amount.~~

25 [0059] The reception unit 707 of a charge processing apparatus 702 need not directly receive information from the transmission unit 706 of an electronic appliance 701; it may indirectly receive information from the transmission unit 706 of an electronic appliance 701. Further, with or without being processed with necessary information, the information relating to the use of an
30 electronic appliance 701, which is transmitted from the transmission unit 706 of an electronic

appliance 701, may be transmitted to the charge processing apparatus 702. The necessary information as above includes a variety of information relating to the user receiving the service by way of an electronic appliance 701, the information on the number of views of banner advertisements, and the like. Moreover, the charge may be determined by using these information during charge processing. For example, in response to the number of views of banner advertisements, the discount rate or amount may be changed accordingly.

~~[0060] Next, an embodiment according to the invention for charging for the usage of a button to operate an electronic appliance will be described. FIG. 8 illustrates this invention. As shown in FIG. 8, the accounting processing method of this invention also has calculation formula storage means and an accounting fee calculation step. Compared to other invention of the present application, this invention is characterized in that the accounting processing is performed for the usage of the operating button that belongs to the electronic appliance, so that the calculation formula that is stored in the calculation formula storage means is a calculation formula to calculate the accounting fee for the usage of this button.~~

~~[0060] Below is described an embodiment according to the present invention, which carries out charge processing for the use of an operation button of an electronic appliance, which is illustrated in FIG. 8. As in other embodiments, the method of charge processing according to the present invention comprises a means for storing computation formulas, and a step for computing a charge. As compared to other embodiments of the present invention, the embodiment herein is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, computes the charge for the use of an operation button of an electronic appliance.~~

~~[0061] The "operating button" serves to effect the function of the electronic appliance for realizing various services. In response to "ON" of the operating button, various services are started. For example, by turning a certain operating button "ON", it is possible to enter a specific home page on the Internet which is not open to the public, or to buy and sell in an online trading of a stock.~~

[0061] The operation button as above operates the function of an electronic appliance implementing various types of services. When the operation button is turned on, it starts a service or a set of services. For example, by turning on an operation button, it may be possible to access a specific homepage on the Internet, which is not generally open to the public, or to trade stocks online.

[0062] ~~FIG. 9 shows a flow of the processing according to this invention. At first, waiting until the information for accounting processing is inputted (S901), if it is inputted, then, the information on the usage of the electronic appliance is obtained (S902). The "information on the usage of the electronic appliance" includes the information on the usage of the operating button of the electronic appliance. Then, an operating button identifier for identifying the used operating button in the electronic appliance is obtained (S903). This operating button identifier is used for associating the used operating button with the calculation formula for calculating the accounting fee in the accounting fee calculation step. Then, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S904). Then, on the basis of the calculation formula that is taken out in the above step and the information on the usage of the operating button, the accounting fee is calculated (S905).~~

[0062] FIG. 9 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S901), and if there is an input, then the information relating to the use of an electronic appliance is obtained (S902). The information relating to the use of an electronic appliance includes information relating to the use of an operation button of an electronic appliance. Then, an operation button identifier for identifying the used operation button on the electronic appliance is obtained (S903). The operation button identifier is used for associating the used operation button with the computation formula for computing the charge in the step of computing a charge. Next, the corresponding computation formula, which computes the charge for the use of an electronic appliance, is extracted from the means for storing computation formulas (S904). Then, on the basis of the computation formula extracted in the above step, and the information relating to the use of an

operation button, the charge is computed therein (S905).

~~[0063] In this case, as calculation formula, a calculation formula such that the accounting fee is 10 yen for each operation of the button, namely, a calculation formula such as the accounting fee=10.times.n (yen) where the number of operating the button is defined as n is considered. Further, the calculation formula may be such that the accounting fee is 20 yen for each operation of the button when the number of operating the button is up to 10 and the accounting fee is 10 yen for each operation of the button when the number of operating the button is 11 and more.~~

[0063] For example, there may be a computation formula, which in effect charges 10 Yen per operation of the button, i.e., Charge = n x 10 Yen, wherein n is the number of times of button operations. Further, there may be a computation formula, which in effect charges 20 Yen per operation of the button when the number of times of button operations is up to 10, and charges 10 Yen per operation of the button when the number of times of button operations is 11 or more.

~~[0064] FIG. 10 illustrates a function of an electronic appliance 1001 and an accounting processing apparatus 1002 according to this invention. As shown in FIG. 10, the electronic appliance 1001 has at least one of operating buttons 1003, 1004 and 1005. The information on the usage of the operating button is transmitted from a transmission unit 1006 of the electronic appliance 1001 to a reception unit 1007 of an accounting processing apparatus 1002. The accounting processing apparatus 1002 comprises a reception unit 1007, an accounting fee calculation unit 1009 and a calculation formula storage unit 1008. The reception unit 1007 receives the information on the usage of the electronic appliance 1001 including the information on the usage of the operating buttons 1003, 1004 and 1005 to be directly or indirectly transmitted from the electronic appliance 1001. The accounting fee calculation unit 1009 receives this information and takes out the information necessary to obtain the calculation formula, which is stored in the calculation formula storage unit 1008. The calculation formula storage unit 1008 stores the calculation formula which is suitable for calculating the accounting fee for the use of these operating buttons 1003, 1004 and 1005. Further, calculation formula obtaining means 1010 of the accounting fee calculation processing unit 1009 obtains this calculation, the accounting fee~~

~~calculation processing unit 1009 calculates the accounting fee by using this calculation formula.~~

[0064] FIG. 10 illustrates an electronic appliance 1001, and a charge processing apparatus 1002 according to the present invention. As shown in FIG. 10, an electronic appliance 1001 comprises at least one of operation buttons (1003, 1004 and 1005). The information relating to the use of an operation button is transmitted from the transmission unit 1006 of an electronic appliance 1001 to the reception unit 1007 of a charge processing apparatus 1002. The charge processing apparatus 1002 comprises a reception unit 1007, a charge computation processor 1009, and a storage unit 1008 for computation formulas. The reception unit 1007 receives information relating to the use of an electronic appliance 1001, including information relating to the use of the operation buttons (1003, 1004 and 1005), which is directly or indirectly transmitted from the electronic appliance 1001. The charge computation processor 1009 receives this information, and extracts information necessary to obtain the computation formula, which is stored in the storage unit 1008 for computation formulas. The storage unit 1008 for computation formulas stores the computation formula for computing the charge for the use of these operation buttons (1003, 1004 and 1005). Further, the means 1010 for obtaining a computation formula in the charge computation processor 1009 obtains this computation formula, and computes the charge by using the same.

[0065] ~~Then, an embodiment for charging for the usage of a disk which is an information accumulation medium of the electronic appliance will be described. FIG. 4 illustrates an accounting processing method according to this invention. This invention provides an accounting processing method for calculating the accounting fee by using this accumulation medium in the case where the electronic appliance has an accumulation medium which can accumulate information. For example, by using this invention, it is possible to differentiate the accounting fee between the case that the music composition which is transmitted to the electronic appliance is listened only once and the case that the music composition which is transmitted to the electronic appliance is listened in plural times by accumulating the data of the transmitted music composition in the accumulation medium of the electronic appliance. A calculation formula that is determined for the use of the accumulation medium is used to calculate this accounting fee.~~

[0065] Below is described an embodiment according to the present invention for carrying out charge processing for the use of a disk, which is an information storage medium of an electronic appliance. FIG. 4 illustrates an embodiment of a method of charge processing according to the present invention. The embodiment provides a method of charge processing for computing the charge for the use of a storage medium, wherein an electronic appliance comprises a storage medium which can store information. For example, in the embodiment, two different charges are possible for two types of scenarios for on-demand-music services: (1) for one-time listening of the music transmitted to the electronic appliance, and (2) for multiple listening of the music transmitted and stored onto the storage medium of the electronic appliance. The computation formula determined for the use of a storage medium is used to compute the charge thereof.

~~[0066] FIG. 11 illustrates an example of an accounting processing method according to this invention. As shown in FIG. 11, an accumulation medium of the use of an object of the accounting processing according to this invention belongs to the electronic appliance. In other words, this electronic appliance is provided with the accumulation medium. However, a recording medium which is inserted in a drive of the electronic appliance to be used for recording, for example, a DVD disk and a CD-R disk and the like are also included in this accumulation medium. The accounting processing method comprises calculation formula storage means and an accounting fee calculation step. This invention is different from other inventions in that the calculation formula stored in the calculation formula storage means calculates the accounting fee for the use of the accumulation medium.~~

[0066] FIG. 11 illustrates an embodiment of a method of charge processing according to the present invention. As shown in FIG. 11, a storage medium, the use of which is the object of charge processing according to the present invention, is built into the electronic appliance. In other words, the electronic appliance is equipped with a storage medium. The storage medium includes a recording medium, which is inserted into the drive of an electronic appliance for recording, such as a DVD disk and a CD-R disk. The method for charge processing herein comprises a means for storing computation formulas, and a step for computing a charge. The embodiment herein is different from other embodiments in that the computation formula stored

in the means for storing computation formulas computes the charge for the use of the storage medium.

~~[0067] FIG. 12 shows an example of a flow of the processing according to this invention. At first, waiting until the information for calculating the accounting fee is inputted (S1201), if it is inputted, then, the information on the usage of the accumulation medium is obtained (S1202). Then, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S1203). Next, on the basis of the calculation formula that is taken out in the above step and the information on the usage of the accumulation medium, the accounting fee is calculated (S1204).~~

[0067] FIG. 12 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S1201), and if there is an input, then the information relating to the use of a storage medium is obtained (S1202). In conjunction with the computation formula, this information is used in computing the charge. The corresponding computation formula, which computes the charge for the use of an electronic appliance, is extracted from the means for storing computation formulas (S1203). Next, on the basis of the computation formula extracted in the above step, and the information relating to the use of the storage medium, the charge is computed therein (S1204).

~~[0068] FIG. 13 illustrates an example of a function of an electronic appliance 1301 and an accumulation processing apparatus 1302 according to this invention. As shown in FIG. 13, an electronic appliance 1301 has an accumulation medium 1303 for accumulating information. By accumulating information in this accumulation medium 1303, it becomes possible to reuse, rearrange, integrate and process the information, so that the service is realized. This electronic appliance 1301 has a transmission unit 1304. By this transmission unit 1304, the information on the usage of the accumulation medium 1303 is directly or indirectly transmitted to the accumulation processing apparatus 1302. The accumulation processing apparatus 1302 of this invention has a reception unit 1305 for receiving the information on the usage of the accumulation medium 1303 from the electronic appliance 1301. The information on the usage of~~

the accumulation medium 1303 includes the information on a capacity of the used accumulation medium 1303, a period during the accumulation medium 1303 is used, hours during the accumulation medium 1303 is used, the number that the information on the accumulation medium 1303 is accessed, the number that the information on the accumulation medium 1303 is read, the number that the information on the accumulation medium 1303 is processed, the number that the accumulation medium 1303 is replaced and a reading rate when the accumulation medium 1303 is read and the like. This accumulation processing apparatus 1302 has a calculation formula storage unit 1306 and an accounting fee calculation processing unit 1307. The calculation formula storage unit 1306 stores the calculation formula for calculating the accounting fee for the use of the accumulation medium 1303. Calculation formula obtaining means 1308 of the accounting fee calculation processing unit 1307 obtains the calculation formula from the calculation formula storage unit 1306 by using the information on the usage of the accumulation medium 1303 or the like, which is received by the reception unit 1305, so that the accounting fee calculation processing unit 1307 calculates the accounting fee by using the obtained calculation formula. As a specific example of the calculation formula, for example, the calculation formula such that the accounting fee is 10 yen per day for the use of the accumulation medium 1303 by 10 mega bytes is considered. Further, according to the kinds of the accumulation medium 1303, this calculation formula may be changed. For example, in the case that the accumulation medium 1303 is a hard disk drive, the accounting fee is 1 yen per day for the use of the accumulation medium 1303 by 1 mega byte and in the case that the accumulation medium 1303 is a RAM, the accounting fee is 5 yen per day for the use of the accumulation medium 1303 by 1 mega byte. Therefore, for example, if the accounting fee is 10 yen per day for the use of the accumulation medium 1303 by 1 mega byte, the calculation formula such that the accounting fee (yen) the used capacity of the accumulation medium (mega byte).times.1 (yen).times.the number of days during the accumulation medium is used (day) is considered.

[0068] FIG. 13 illustrates embodiments of an electronic appliance 1301, and a charge processing apparatus 1302 according to the present invention. As shown in FIG. 13, an electronic appliance 1301 comprises a storage medium 1303 for storing information. By way of storing information in this storage medium 1303, information can be reused, rearranged, integrated, and

processed for the purposes of implementation of services. The electronic appliance 1301 comprises a transmission unit 1304, and by way of this transmission unit 1304, the information relating to the use of the storage medium 1303 is directly or indirectly transmitted to the charge processing apparatus 1302. The charge processing apparatus 1302 of the present invention
5 comprises a reception unit 1305 for receiving information relating to the use of a storage medium 1303 from the electronic appliance 1301. The information relating to the use of a storage medium 1303 includes information relating to the amount of use of a storage medium 1303, the overall period of use, time, the number of access to information of storage medium, the number of times read in respect to information of storage medium 1303, the number of times processed in respect
10 to information of storage medium 1303, and the reading speed in respect to information of storage medium 1303. The charge processing apparatus 1302 comprises a storage unit 1306 for computation formulas, and a charge computation processor 1307. The storage unit 1306 for computation formulas stores the computation formula for computing the charge for the use of a storage medium 1303. The means 1308 for obtaining a computation formula in the charge
15 computation processor 1307 obtains the computation formula from the storage unit 1306 for computation formulas by means of using information relating to the use of a storage medium 1303 or the like received by the reception unit 1305, and accordingly the charge computation processor 1307 computes the charge thereof. For example, there may be a computation formula, which charges 10 Yen per day for using 10 mega bytes of storage medium 1303. Further, the
20 computation formula may change according to the types of storage medium 1303. For example, if the storage medium 1303 is a hard-disk drive, the charge may be 1 Yen per day for using 1 mega bytes of storage medium 1303, and 5 Yen per day for using 1 mega byte of RAM. Accordingly, if the charge is 10 Yen per day for using 1 mega bytes of storage medium 1303, the computation formula is as follows: Charge (Yen) = Amount of use of storage medium (mega
25 bytes) x 10 (Yen) x Number of days in use (days).

[0069] Next, the invention having further characteristic parameters in addition to the parameters that are used upon calculating the accounting fee according to the aforementioned inventions will be explained below. This invention relates to how to quantify the usage of the
30 electronic appliance, the usage of the function, the usage of the operating button and the usage of

~~the accumulation medium in the aforementioned invention and to use them in the calculation formula. In this invention, they are quantified depending on "hours of use", "the number of use", "period of use" and "place for use". Specifically, combinations shown in FIG. 14 are considered. According to these combinations, sixteen combinations are indicated. However, as a parameter to be used in the calculation formula, more than two combinations in these combinations may be also available. The accounting processing receptive for the update and the change of the service can be performed due to these combinations. For example, according to the calculation formula for the usage of a picture telephone of the electronic appliance, the accounting fee is 10 yen per hour of usage, the accounting fee is 5 yen per hour of usage on and after five times of the usage, the entire accounting fee is reduced by 30% in the case that a usage period from start of use to end of use passes over more than one year and the extra charge is paid by 20% of the entire accounting fee in the case that the television telephone of the electronic appliance is used at more than two places. Additionally, if there is the operating button of an auction of a costume used in a movie in the buttons of the electronic appliance, the accounting fee is 5 yen per minute of time of use, the extra charge is paid by 10% of the entire accounting fee if the number of use exceeds ten times, the entire extra charge is reduced by 20% if the usage period passes over one year and the extra charge is paid by 5% of the entire accounting fee if the electronic appliance is used in the open air.~~

[0069] Below is described the characteristics of parameters used in computing a charge according to the present invention. The embodiment relates to quantifying the aforementioned use of an electronic appliance, functions, operation buttons, and storage medium, and utilizing such quantification in the computation formula. The embodiment quantifies the following factors; the time period of use, the number of times of use, the overall period of use, the location of use. In particular, 16 combinations as examples are shown in FIG. 14. As a parameter to be used in the computation formula, a combination of two or more variables in FIG. 14 may be used. Based on these combinations, charge processing can be carried out in a flexible manner according to the updates and changes in services. For example, in the case of the use of a function of a picture phone in an electronic appliance, the computation formula may be as follows: 10 Yen per hour for the time period of use, 5 Yen per hour if the number of times of use

is more than five, 30% discount from the total if the overall period of use from the initial subscription has been more than one year, and 20% discount from the total charge if there are two or more locations of use. Further, in the case of the use of an operation button on an electronic appliance for online auctioning of a clothing in a movie shown in said electronic appliance, for example, the computation formula may be as follows: 5 Yen per minute for the time period of use, 10% discount if the number of times of use exceeds 10 times, 20% discount if the overall period of use exceeds one year, and 5% discount if the location of use is outdoor.

~~[0070] Next, an embodiment according to the invention related to an accounting processing method in the case of charging the accounting fee in compensation for lending of the electronic appliance will be explained below. This invention relates to a case that an agent for providing a service is charged. At first, a method for calculating the accounting fee for the setting of the electronic appliance will be explained. As described above, the electronic appliance according to this invention includes the electronic appliance constituting a part of the multimedia terminal in addition to the multimedia terminal or the like. The electronic appliance constituting a part of the multimedia terminal includes "a screen display device", "a disk as an accumulation medium", "a remote controller button", "VRAM (video ram)" and "a network interface" and the like of the multimedia terminal. Further, the network interface includes a modem such as an Ethernet interface and a V90 modem and the like, an IEEE 1394 interface, a DV (digital video) terminal and a SD card interface or the like. That is because these can provide discriminating service.~~

[0070] Below is described an embodiment of a method of charge processing according to the present invention, which carries out charge processing for the rental of an electronic appliance. The embodiment involves charging the service provider. First, described is a method of computing a charge for the installation of an electronic appliance. An electronic appliance according to the present invention includes a multimedia terminal or the like, in addition to an electronic appliance comprising a part of a multimedia terminal. An electronic appliance comprising a part of a multimedia terminal includes a screen display device, a disk as a storage medium, a remote controller button, VRAM (Video RAM), a network interface, or the like of a multimedia terminal. Further, a network interface includes a modem such as an Ethernet interface

and a V90 modem, an IEEE 1394 interface, a DV (digital video) terminal and a SD card interface or the like. By way of these apparatuses, service providers then can provide dedicated services.

~~[0071] Additionally, as shown in FIG. 15, this accounting processing method according to this invention has identifier managing means, calculation formula storage means and an accounting fee calculation step. The explanation will be given based on this example. The "identifier managing means" is means for managing a manager identifier for identifying a manager of the electronic appliance. Specifically, the "manager" is a service providing agent for providing a service to an end user in response to lending of the electronic appliance. For example, if a content of the service is an advertisement, the "manager" is an advertiser and if a content of the service is distribution of a video image, the "manager" is an agent for lending a video program or the like. According to an example shown in FIG. 15, the manager identifiers are "A" and "B". These manager identifiers are held with making a pair with an electronic appliance number specific to each electronic appliance. The "calculation formula storage means" stores the calculation formula for calculating the accounting fee for the setting of the electronic appliance. According to this example, the calculation formula is stored with making a pair with the manager identifier. In the case that the calculation formulas are the same irrespective of the manager, it is not necessary to store the calculation formula with making a pair with the manager identifier. Next, according to the "accounting fee calculation step", the accounting fee is calculated for the manager who is identified by the manager identifier on the basis of this calculation formula. In this case, there is a case such that the information on the setting of the electronic appliance is used. In this example, the manager of the manager identifier A manages all three electronic appliances, so that the information on the setting of these electronic appliances is used when the calculation formula calculates the accounting fee.~~

[0071] Further, as shown in FIG. 15, the method of charge processing according to the present invention comprises a means for managing identifiers, a means for storing computation formulas, and a means for computing a charge. An embodiment as such is described below. A means for managing identifiers is a means for managing administrator identifiers, each of which identifies the administrator of an electronic appliance. In particular, an administrator is a service provider,

who provides services to a terminal user of a rental electronic appliance. For example, if the service content is a commercial advertisement, the administrator is an advertiser, or if the service is distribution of videos, the administrator is a video rental operator or the like. According to the embodiment shown in FIG. 15, the administrators are A and B. Each administrator identifier is held in respect to the electronic appliance number specific to each electronic appliance. The means for storing computation formulas stores the computation formula for computing the charge for the installation of an electronic appliance. In this embodiment, a computation formula is stored in respect to each administrator identifier. If the computation formulas are the same irrespective of administrators, it is not necessary to store the computation formula in respect to each administrator identifier. Next, the step for computing a charge computes the charge in respect to the administrator identified by the administrator identifier on the basis of this computation formula. Moreover, the information relating to installation may be used herein. In the embodiment, the administrator of Administrator Identifier A administers all three electronic appliances, so that the information relating to the installation of these electronic appliances is utilized during the computation of the charge using the computation formula.

[0072] FIG. 16 shows a flow of the processing according to this invention. At first, waiting until the information for calculating the accounting fee is inputted (S1601), if it is inputted, then, the manager identifier of the manager who is an object of the accounting is obtained (S1602). The manager identifier may be obtained by inputting the manager identifier to identify the specific manager upon starting the accounting processing or it may be obtained from a table in which this accounting processing apparatus holds the manager identifier as a table. For example, in the case of regularly performing the accounting processing for a plurality of managers who are objects of the accounting processing, the manager identification numbers held in the table are processed from a smaller number. Next, the information on the setting of the electronic appliance associated with the manager identifier is obtained (S1603). Further, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S1604). Then, on the basis of the calculation formula that is taken out in the step and the information on the setting of the electronic appliance, the accounting fee is calculated (S1605).

[0072] FIG 16 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S1601), and if there is an input, the administrator identifier of an administrator, who is the object of charge (chargee), is obtained (S1602). The administrator identifier may be obtained by way of an input of an administrator identifier to identify the specific administrator at the time of starting charge processing, or it may be obtained from a table of administrator identifiers, held in the charge processing apparatus. For example, in the case of regularly carrying out charge processing in respect to a plurality of administrators as objects of charge processing, it may be carried out according to the administrator identifier numbers held in a table, starting from the smallest number thereof. Next, the information relating to the installation of an electronic appliance associated with the administrator identifier is obtained (S1603). Further, the corresponding computation formula, which computes the charge for the use of said electronic appliance, is extracted from the means for storing computation formulas (S1604). Then, on the basis of the computation formula extracted in the above step, and the information relating to the installation of the electronic appliance, the charge thereof is computed (S1605).

~~[0073] FIG 17 illustrates an example of a function of an electronic appliance 1701 and an accounting processing apparatus 1702 according to this invention. The electronic appliance 1701 has an electronic appliance number holding unit 1704 and a transmission unit 1703. The "electronic appliance number holding unit" 1704 holds the electronic appliance number as relating it to the information on the electronic appliance 1701. The "transmission unit" 1703 transmits the information on the electronic appliance 1701 to the accounting processing apparatus 1702 as relating it to the electronic appliance number.~~

[0073] FIG 17 illustrates embodiments of an electronic appliance 1701, and a charge processing apparatus 1702 according to the present invention. An electronic appliance 1701 comprises a holding unit 1704 for electronic appliance numbers, and a transmission unit 1703. The holding unit 1704 for electronic appliance numbers holds electronic appliance numbers, each of which is associated with the information relating to the respective electronic appliance 1701. The transmission unit 1703 transmits information relating to the electronic appliance 1701,

which is associated with the respective electronic appliance number, to the charge processing apparatus 1702.

[0074] ~~The "information on the electronic appliance" means the information on the usage of the electronic appliance 1701 and the setting thereof. The information on the usage of the electronic appliance 1701 includes the information on that the function of the electronic appliance 1701 is activated, what function is activated and what operating button is activated and the like. The "accounting processing apparatus" 1702 comprises a reception unit 1705, a calculation formula storage unit 1706, a manager identifier managing unit 1707 and an accounting fee calculation processing unit 1708. For example, the "reception unit" 1705 receives the information on the setting of the electronic appliance 1701 as the information related to the electronic appliance number. Only one electronic appliance number is determined for each electronic appliance 1701, so that there is no electronic appliance 1701 having the same number. The information on the setting of this electronic appliance 1701 is transmitted to the accounting fee calculation processing unit 1708 with being related to the electronic appliance number to be used for the accounting processing.~~

[0074] The information relating to the electronic appliance includes information relating to the use of the electronic appliance 1701 and the installation thereof. The information relating to the use of the electronic appliance 1701 includes the status information of activation of functions and operation buttons of the electronic appliance 1701, and the like. The charge processing apparatus 1702 comprises a reception unit 1705, a storage unit 1706 for computation formulas, an identifier manager 1707, and a charge computation processor 1708. For example, the reception unit 1705 receives information relating to the installation of an electronic appliance 1701 as information associated with the electronic appliance number. An electronic appliance number is uniquely set for each electronic appliance 1701, so that there are no two electronic appliances 1701 having the same number. The information relating to the installation of the electronic appliance 1701, which is associated with the electronic appliance number, is transmitted to the charge computation processor 1708 for charge processing.

~~[0075] The "manager identifier managing unit" 1707 holds the electronic appliance number and the manager identifier with being paired each other. In this case, "being paired" means to associate them each other or to hold them as a table. The manager identifier managing unit 1707 can take out the manager identifier 1707 of the manager of the present appliance from the appliance number which is received by the reception unit 1705 by using this association. This manager identifier is passed over to a calculation formula storage unit 1706 or an accounting fee calculation processing unit 1708 to be used to select the calculation formula necessary for the accounting processing for the present manager. This is because the calculation formula of the accounting fee is provided according to each manager. Additionally, in the case of specifying the manager in advance and performing the accounting processing for this manager, the processing is performed in such a manner that the manager identifier is specified at the point that the processing is started, the electronic appliance number being paired to this manager identifier is taken out and the information on the setting of the electronic appliance 1701 is obtained from the electronic appliance 1701 corresponding to this number via the reception unit 1705.~~

[0075] The manager 1707 for administrator identifiers holds the electronic appliance number in respect to the administrator identifier. In this case, "holding it in respect to" means holding them by association or to hold them as a table. By using this association, the manager 1707 for administrator identifiers can extract the administrator identifier 1707 of the administrator of an electronic appliance from the electronic appliance number received by the reception unit 1705. This administrator identifier is passed over to the storage unit 1706 for computation formulas or the charge computation processor 1708, and is used to select the computation formula necessary for charge processing in respect to the administrator. This is so because the computation formula for the charge is provided according to each administrator. Further, in the case of specifying the administrator in advance and carrying out charge processing in respect to said administrator, the charge processing is carried out in such a manner that the administrator identifier is specified at the start of charge processing; the electronic appliance number in respect to said administrator identifier is extracted; and the information relating to the installation of the electronic appliance 1701 is obtained from the electronic appliance 1701 corresponding to this number via the reception unit 1705.

~~[0076] The "calculation formula storage unit" 1706 stores the calculation formula for calculating the accounting fee for the usage and the setting of the electronic appliance 1701. This calculation formula is stored in the calculation formula storage unit 1706 with being paired with the manager identifier since this calculation formula is occasionally different for each manager.~~

5 ~~The "accounting fee calculation processing unit" 1708 has calculation formula obtaining means 1710 for obtaining the calculation formula to be used for calculating the accounting fee for the manager from the calculation formula, which is stored in the calculation formula storage unit 1706. Further, the accounting fee calculation processing unit 1708 obtains the manager identifier corresponding to manager identifier obtaining means 1709 from the manager identifier managing~~

10 ~~unit and performs the accounting processing by using other information on the setting of the electronic appliance 1701 which is received by the reception unit 1705, as associating the manager identifier with the calculation formula.~~

[0076] The storage unit 1706 for computation formulas stores the computation formula for

15 computing the charge for the use and the installation of an electronic appliance 1701. The computation formula is stored in the storage unit 1706 for computation formulas in respect to the administrator identifier since the computation formula of one administrator is sometimes different from that of another. The charge computation processor 1708 comprises a means 1710

20 for obtaining a computation formula, which obtains the computation formula used for computing the charge in respect to the administrator from the computation formulas stored in the storage unit 1706 for computation formulas. Further, the charge computation processor 1708 obtains the

corresponding administrator identifier from the manager for administrator identifiers, and while associating the computation formula with the administrator identifier, the charge processing is carried out by combining other information relating to the installation of the electronic appliance

25 1701 received by the reception unit 1705.

~~[0077] Next, the invention providing an accounting processing method in the case of charging the accounting fee for lending of the functions of the electronic appliance or allotment sale thereof will be explained below. This invention relates to an accounting processing method for~~

30 ~~calculating the accounting fee in compensation not for an entire electronic appliance but for~~

~~lending the function belonged to the present electronic appliance and embedding the present function in the electronic appliance by a person owning the electronic appliance. The "embedding" means to mount the function in the electronic appliance. For example, this mounted function can distribute a commercial message of a specific company through the electronic~~
5 ~~appliance.~~

[0077] Below is described an embodiment of a method of charge processing according to the present invention, which carries out charge processing for the rental or sale of a function of an electronic appliance. The embodiment relates to a method of charge processing for computing the
10 charge for the rental of a function on an electronic appliance, or for the rental of a function built into the electronic appliance—not for the entire electronic appliance of the user. A built-in function is a function actually mounted onto the electronic appliance, such as a function enabling a flow of commercials of a specific company via an electronic appliance.

~~[0078] FIG. 18 illustrates an accounting processing method according to this invention. The accounting processing method according to this invention has identifier managing means, calculation formula storage means and an accounting fee calculation step. It is a first characteristic point of this invention that the identifier managing means manages a sub-system manager identifier for identifying the manager of the sub-system to realize one function of the~~
15 ~~electronic appliance. That is because the electronic appliance is lent for each sub-system, the electronic appliance is sold in lots and the accounting fee is calculated. The "sub-system" serves to realize the function of the electronic appliance. A plurality of sub-systems are mounted on the electronic appliance so that a plurality of functions can be realized in one electronic appliance. These plural sub-systems have a function identifier for each sub-system since they are needed to~~
20 ~~be associated with the sub-system manager in the process of the accounting processing. The sub-system means a system for designating a specific language other than Japanese and switching Japanese with the designated language by voice in the case that a paid video program is viewed by the electronic appliance.~~

30 [0078] FIG. 18 illustrates an embodiment of a method of charge processing according to the

present invention. The embodiment of a method of charge processing according to the present invention comprises a means for managing identifiers, a means for storing computation formulas, and a step for computing a charge. First, the embodiment is characterized by the fact that the means for managing identifiers manages the sub-system administrator identifiers, each of which identifies the administrator of a sub-system implementing a function of an electronic appliance. This is so because the charge is computed on the basis of the rental or sale of each sub-system of an electronic appliance. A sub-system serves to implement a function or a set of functions of an electronic appliance. A plurality of sub-systems is mounted onto the electronic appliance so that a plurality of functions can be implemented on the electronic appliance. Each of these sub-systems has a function identifier, which needs to be associated with the sub-system administrator during charge processing. For example, in the case of pay video viewed by means an electronic appliance, a sub-system may include a system for designating a specific language other than Japanese and voice-switching to the designated language.

[0079] ~~Additionally, it is a second characteristic point of this invention that the calculation formula stored in the calculation formula storage means is a calculation formula for calculating the accounting fee for the manager who is identified by this sub-system manager identifier. That is because in order to calculate the accounting fee for each function of the electronic appliance, it is necessary to use the calculation formula which is prepared for each sub-system manager who manages this function. Accordingly, the calculation formula which is stored in the calculation formula storage means, is associated with the sub-system manager identifier. Further, the operation of the accounting fee calculation step is basically the same as that of the invention which is explained previously.~~

[0079] Secondly, the embodiment according to the present invention is characterized by the fact that the computation formula stored in the means for storing computation formulas is a computation formula for computing the charge in respect to the administrator identified by the sub-system administrator identifier. This is so because the computation formula, which is preset for each sub-system administrator administering said function, is required to compute the charge for each function of the electronic appliance. Accordingly, the computation formula, which is

stored in the means for storing computation formulas, is associated with the sub-system administrator identifier. The operation of the step of computing a charge is essentially the same as that of the embodiment described previously.

5 ~~[0080] FIG. 19 illustrates a flow of the processing according to this invention. At first, waiting until the information for calculating the accounting fee is inputted (S1901), if it is inputted, then, the sub-system manager identifier of the sub-system manager who is an object of the accounting is obtained (S1902). Next, the function identifier may be obtained to identify the function which is associated with the sub-system manager identifier (S1903) and the information on the~~
10 ~~embedding of the function which is identified by this function identifier, is obtained (S1904). Further, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S1905). Then, on the basis of the calculation formula that is taken out in the above step and the information on the embedding of the function of the electronic appliance, the~~
15 ~~accounting fee is calculated (S1906).~~

[0080] FIG. 19 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge computation (S1901), and if there is an input, then, the sub-system administrator identifier of a sub-system administrator (chargee),
20 which is the object of charge, is obtained (S1902). Next, the function identifier, which identifies the function associated with the sub-system administrator identifier, is obtained (S1903), and the information relating to the built-in function, which is identified by the function identifier, is obtained (S1904). Moreover, the corresponding computation formula is extracted from the means
25 for storing computation formulas, which stores the computation formula for computing the charge for the use of said electronic appliance (S1905). Then, on the basis of the computation formula extracted in the above step, and the information relating to the built-in function of the electronic appliance, the charge thereof is computed therein (S1906).

~~[0081] FIG. 20 illustrates a function of an electronic appliance 2001 and an accounting processing apparatus 2002 according to this invention. The electronic appliance 2001 has a sub~~
30

system for realizing a plurality of functions. According to this example, the electronic appliance 2001 has sub systems 2003, 2004 and 2005 to realize three functions from a function 1 to a function 3. Further, a function identifier of the sub system is defined for each sub system and it is held in sub system identifier holding units 2006, 2007 and 2008. According to this example, the holding unit is provided for each function sub system. However, function identifiers of the three sub systems may be held at one place. This function identifier is simultaneously embedded when the function is embedded in the electronic appliance 2001 or it operates as an identifier capable of being taken out by preparing the function identifier in the electronic appliance 2001 in advance and embedding the function.

[0081] FIG. 20 illustrates the functions of an electronic appliance 2001, and a charge processing apparatus 2001 according to the present invention. An electronic appliance 2001 comprises a sub-system for implementing a plurality of functions. According to the embodiment, an electronic appliance 2001 comprises sub-systems (2003, 2004 and 2005) to implement three functions (Function 1 to 3). Further, a function identifier is defined for each sub-system, and it is respectively held in the holding units (2006, 2007 and 2008) for sub-system identifiers. According to the embodiment, a holding unit is provided for each function sub-system. However, function identifiers for three sub-systems may be held at one place. For the purposes of operating as an identifier capable of being extracted therein, the function identifier may be built-in or preset into the electronic appliance 2001 when the function is installed into the electronic appliance 2001.

[0082] The accounting processing apparatus 2002 comprises a reception unit 2010, a calculation formula storage unit 2011, an identifier managing unit 2012 and an accounting fee calculation processing unit 2013. The "reception unit" 2010 receives the information on the embedding of the function including the manager identifier, which is transmitted from the transmission unit 2009 of the electronic appliance 2001, and passes it to the identifier managing unit 2012 or the accounting fee calculation processing unit 2013.

[0082] A charge processing apparatus 2002 according to the embodiment comprises a reception

unit 2010, a storage unit 2011 for computation formulas, an identifier manager 2012, and a charge computation processor 2013. The reception unit 2010 receives information relating to the built-in function, including the function identifier, which is transmitted from the transmission unit 2009 of an electronic appliance 2001, and passes it to the identifier manager 2012 or to the charge computation processor 2013.

~~[0083] The "identifier managing unit" 2012 takes out the sub-system manager identifier being paired with the function identifier which is received from the reception unit 2010 to pass it to the calculation formula storage unit 2011. The "calculation formula storage unit" 2011 stores the sub-system manager identifier with being paired with the sub-system manager identifier. In the case of performing the accounting processing by specifying the sub-system manager identifier in advance, the function identifier is specified from the sub-system manager identifiers in the identifier managing unit so as to obtain the information on the embedding of the function from the electronic appliance 2001 having the corresponding function identifier.~~

[0083] The identifier manager 2012 extracts the sub-system administrator identifier in respect to the function identifier received from the reception unit 2010, and passes the same to the storage unit 2011 for computation formulas. The storage unit 2011 for computation formulas stores the computation formula in respect to the sub-system administrator identifier. In the case of carrying out charge processing by presetting the sub-system administrator identifier in advance, the function identifier from the sub-system administrator identifier is specified in the identifier manager, and the information relating to the built-in function is obtained from the electronic appliance 2001 holding the corresponding function identifier.

~~[0084] In the "accounting fee calculation processing unit" 2013, sub-system manager identifier obtaining means 2014 obtains the sub-system manager identifier from the identifier managing unit 2012. Then, while specifying the subject of the accounting by using the sub-system manager identifier, the accounting processing is performed by using the calculation formula which is obtained from the calculation formula storage unit 2011 by the calculation formula selection obtaining means 2015.~~

[0084] In the charge computation processor 2013, the means 2014 for obtaining a sub-system administrator identifier obtains the sub-system administrator identifier from the identifier manager 2012. Then, while specifying the subject of charge (chargee) by utilizing the sub-system administrator identifier, the charge processing is carried out by using the computation formula obtained from the storage unit 2011 for computation formulas by the means 2015 for obtaining the selection of computation formulas.

[0085] ~~Next, the invention providing an accounting processing method in the case of charging the accounting fee for lending of the button for operating the electronic appliance or allotment sale thereof will be explained below. This invention relates to an accounting processing method for calculating the accounting fee in compensation not for an entire electronic appliance but for lending the right of using the operating button belonged to the present electronic appliance and selling the operating buttons in lots and arranging the operating button in the electronic appliance by a person owning the electronic appliance. The "arranging the operating button" means to allocate a function for exclusive use moving to a home page, in which a commercial message of a specific company is provided, in the operating button of the electronic appliance.~~

[0085] Below is described a method of charge processing for the rental or sale of an operation button of an electronic appliance. The embodiment relates to a method of charge processing for computing the charge for the rental or sale of the rights relating to the use of an operation button on an electronic appliance, or for the installation of a button onto an electronic appliance—not for the entire electronic appliance of the user. The installation of an operation button for example involves attributing to the operation button on an electronic appliance the exclusive function of moving to a homepage having commercial advertisements of a specified company.

[0086] ~~FIG. 21 illustrates an accounting processing method according to this invention. As shown in FIG. 21, the accounting processing method according to this invention comprises calculation formula storage means, identifier managing means and an accounting fee calculation step. The electronic appliance according to this invention is operated by a remote controller having at least one operating button. It is a first characteristic point of this invention that the~~

~~identifier managing means manages a button manager identifier for identifying the manager of one button of this remote controller. Further, it is a second characteristic point of this invention that the calculation formula stored in the calculation formula storage means is a calculation formula for calculating the accounting fee for the setting of one button for the manager who is identified by the button manager identifier. An example shown in FIG. 21 illustrates how the accounting fee is charged for the setting of the button 2.~~

[0086] FIG. 21 illustrates a method of charge process according to the present invention. As shown in FIG. 21, a method of charge process according to the present invention comprises a means for storing computation formulas, a means for managing identifiers, and a step of computing a charge. The electronic appliance according to the present invention is operated by a remote controller having at least one operation button. First, the embodiment is characterized by the fact that the means for managing identifiers manages the button administrator identifiers, each of which identifies the administrator of a button on a remote controller. Secondly, the embodiment is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, is a formula for computing the charge for the installation of a button in respect to an administrator identified by the button administrator identifier. FIG. 21 is an embodiment according to the present invention, which carries out charge processing for the installation of two buttons.

~~[0087] The identifier managing means manages the button manager identifier and the button identifier with paring them, so that it is possible to associate the information on the setting of the button associated with the button identifier with the manager of the button identified by the button manager identifier. Further, the calculation formula storage means manages the button manager identifier and calculation formula with paring them, so that it is possible to associate the calculation formulas each other for each manager of the button. Accordingly, it becomes possible to perform the accounting processing by using the corresponding calculation formula for each manager of the button on the basis of the information on the setting of the button.~~

[0087] The means for managing identifiers manages the button identifiers in respect to each

button administrator identifier so that it is possible to associate (a) with (b), wherein (a) is information relating to the installation of the button associated with the button identifier, and (b) is the administrator of the button identified by the button administrator identifier. Moreover, the means for storing computation formulas manages the computation formulas in respect to the
5 button administrator so that it is possible to associate the respective computation formula with each button administrator identifier. Accordingly, on the basis of the information relating to the installation of a button, the charge processing may be carried out by way of using the respective computation formula corresponding to each administrator of said button.

10 ~~[0088] FIG. 22 illustrates a flow of this accounting processing. At first, waiting until the information for calculating the accounting fee is inputted (S2201), if it is inputted, then, the manager identifier of the button manager who is an object of the accounting is obtained (S2202). Next, the button identifier may be obtained to identify the button, which is associated with the button manager identifier (S2203). Consequently, the information on the setting of the button~~
15 ~~which is identified by this button identifier is obtained (S2204). Further, the calculation formula is taken out from the calculation formula storage means for storing the calculation formula which calculates the accounting fee for the use of the electronic appliance (S2205). Then, on the basis of the calculation formula that is taken out in the above step and the information on the setting of the button, the accounting fee is calculated (S2206).~~

20 [0088] FIG. 22 is a flowchart of charge processing according to an embodiment of the present invention. At first, the process involves waiting until there is an input for charge processing (S2201), and if there is an input, then the administrator identifier, which identifies the button associated with the button administrator identifier, is obtained (S2202). Next, the button
25 identifier, which identifies the button associated with the button administrator identifier, is obtained (S2203). Consequently, the information relating to the installation of the button identified by the button identifier is obtained (S2204). Moreover, the corresponding computation formula is extracted from the means for storing computation formulas, which stores the computation formula for computing the charge for the use of the electronic appliance (S2205).
30 Then, on the basis of the computation formula extracted in the above step, and the information

relating to the installation of the button, the charge thereof is computed therein (S2206).

[0089] ~~FIG. 23 illustrates a function of a remote controller 2301 and an accounting processing apparatus 2302 according to this invention. The remote controller 2301 holds button identifiers for the function buttons 2303, 2304 and 2305 in button identifier holding units 2306, 2307 and 2308, respectively. The information on the setting of the button associated with the button identifier is directly or indirectly transmitted to the accounting processing apparatus 2302 from the transmission unit 2309. The accounting processing apparatus 2302 comprises a reception unit 2310, an identifier managing unit 2312, a calculation formula storage unit 2311 and an accounting fee calculation processing unit 2313. The reception unit 2310 receives the information on the setting of the button which is transmitted from the remote controller 2301. The identifier managing unit 2312 manages the button manager identifier and the button identifier as paring them. The calculation formula storage unit 2311 manages the button manager identifier and the calculation formula as paring them, so that the calculation formula can be obtained by specifying the button manager identifier. By using this calculation formula, the accounting processing is performed in the accounting fee calculation processing unit 2313. The accounting fee calculation processing unit 2313 has button manager identifier obtaining means 2314 and calculation formula selection obtaining means 2315. Then, the accounting fee calculation processing unit 2313 associates them with the button manager identifier which is obtained by the button manager identifier obtaining means 2314 so as to perform the accounting processing on the basis of the calculation formula which is obtained from the calculation formula storage unit 2311 by the calculation formula selection obtaining means 2315.~~

[0089] FIG. 23 illustrates the functions of a remote controller 2301, and a charge processing apparatus 2302 according to the present invention. A remote controller 2301 holds the respective button identifiers for the function buttons (2303, 2304 and 2305) in the holding units (2306, 2307 and 2308) for button identifiers. The information relating to the installation of the button associated with the button identifier is directly or indirectly transmitted to the charge processing apparatus 2302 from the transmission unit 2309. The charge processing apparatus 2302 comprises a reception unit 2310, an identifier manager 2312, a storage unit 2311 for computation

formulas, and a charge computation processor 2313. The reception unit 2310 receives information relating to the installation of the button, which is transmitted from the remote controller 2301. The identifier manager 2312 manages the button identifiers in respect to the button administrator identifier. The storage unit 2311 for computation formulas manages the computation formulas in respect to the button administrator identifier, so that the computation formula can be obtained by specifying the button administrator identifier. Accordingly, the charge processing is carried out in the charge computation processor 2313 by using this computation formula. The charge computation processor 2313 comprises a means 2314 for obtaining a button administrator identifier, and a means 2315 for obtaining a computation formula. Then, the charge computation processor 2313 makes association with the button administrator identifier obtained by the means 2314 for obtaining a button administrator identifier so as to carry out charge processing on the basis of the computation formula obtained from the storage unit for computation formulas by the means 2315 for obtaining a computation formula.

~~[0090]— Additionally, upon calculating the accounting fee for lending of the electronic appliance, lending of the function of the electronic appliance and lending of the button, it is possible to perform the accounting processing by using the calculation formula with defining at least one of a time of use, the number of use, a period during it is arranged and a place of use as a parameter. These items are included in the information on the usage of the electronic appliance, the information on the embedding of the function of the electronic appliance and the information on the setting of the button of the electronic appliance. The accounting processing receptive for the update and the change of the service can be performed by these items.~~

[0090] Moreover, while computing the charge for the rental of an electronic appliance, or for the rental of a function or a button, the charge processing may carried out by using a computation formula with one or more parameters selected from the parameters of the time period of use, the number of times of use, the overall period of installation, and the location. These parameters are included in information relating to the use of an electronic appliance, information relating to the built-in function of an electronic appliance, and information relating to the installation of a button of an electronic appliance. Based on these parameters, the charge processing can be

carried out in a flexible manner according to the changes and updates in services as provided.

[0091] ~~Further, it is also possible to use a computer readable recording medium in which a program for executing the aforementioned accounting processing method is described. In this case, a computer means an accounting processing apparatus.~~

[0091] Moreover, the aforementioned method for charge processing can be carried out by using a computer readable recording medium encoded with a program for executing such method. In such case, a computer is conceptually inclusive of a charge processing apparatus.

[0092] ~~Next, an accounting processing system for performing the accounting processing for the service to be realized by the electronic appliance will be explained.~~

[0092] Below is described a charge processing system for services realized by an electronic appliance.

[0093] ~~FIG. 24 illustrates an example of a function block of this accounting processing system. As shown in FIG. 24, an accounting processing system 2400 is an accounting processing system for performing the accounting processing for the service to be realized by the electronic appliance. Further, the accounting processing system 2400 has a service offering unit 2401, a function managing unit 2402 and an accounting processing unit 2403. The service offering unit 2401 offers various services to a user. In this case, various services include a service capable of being electronically offered. For example, various services include a service for distributing a video, a service of a live broadcast of a baseball game and a service of distributing an on-line game and the like. The function managing unit 2402 manages a service offering function belonged to the service offering unit 2401. Managing of the service offering function includes that the service to be offered by the service offering unit 2401 is selected and the service offering unit 2401 enables the service to be offered. The accounting processing unit 2403 selects an appropriate accounting method according to the respective service offering functions which are managed by the function managing unit 2402, and performs the accounting processing. It means~~

that this appropriate accounting method is selected by the function managing unit 2402 according to the service offered by the service offering unit 2401. The appropriate accounting method includes the selection of the accounting fee and the accounting means. Additionally, performing the accounting processing means performing a part of or all the accounting processing. Since a part of the accounting processing may be performed, for example, performing the accounting processing includes outputting the accounting amount and its accounting means and the like. In the case that they are simply outputted, a final accounting processing is performed through the external appliance. It is needless to say that a final accounting processing may be performed in the case that the object to be charged is specified.

[0093] FIG. 24 is a functional block diagram of an embodiment of a charge processing system according to the present invention. As shown in FIG. 24, a charge processing system 2400 is a system for carrying out charge processing for services realized by an electronic appliance. Moreover, the charge processing system 2400 comprises a service provider 2401, a function manager 2402, and a charge processor 2403. The service provider 2401 provides various types of services to a user. In this case, various types of services include services capable of being electronically provided. For example, various types of services include services for video distribution, live broadcasting of baseball games, and on-line game distribution. The function manager 2402 manages the functions of the services provided by the service provider 2401, which involves selecting and enabling the services provided by the service provider 2401. The charge processor 2403 selects an appropriate charging method according to the respective service functions managed by the function manager 2402, and carries out charge processing accordingly. In other words, an appropriate charging method is in effect selected by the function manager 2402 according to the services provided by the service provider 2401. The appropriate charging method involves selection of a charge, and a means for charging. Moreover, the charge processing herein conceptually includes charge processing in part or in whole. Since charge processing in part may be carried out herein, charge processing for example may include outputting the charge amount, and the means for charging. If they are simply outputted, the final charge processing is carried out via an external apparatus.

[0094] FIG. 25 shows a flow of the processing in a service offering unit 2501, a function managing unit 2502 and an accounting processing unit 2503 according to this embodiment. As shown in FIG. 25, the service capable of being offered in the service offering unit 2501 is held with being associated with the identifier. For example, the identifier "01" is associated with "a live broadcast of a baseball game", "02" is associated with "news for 24 hours a day" and "03" is associated with "information for traffic jam". If the function managing unit selects the identifier "01", the service of "a live broadcast of a baseball game" is offered to the user through the electronic appliance. On the other hand, the information indicating that the service to be identified by this identifier "01" is offered is passed to the accounting processing unit 2503. The accounting processing unit 2503 holds the accounting amount and the accounting means with being associated with the identifier. This is referred to as accounting method selection means. Since the service to be identified by the identifier "01" is offered, "50 yen" as the accounting amount is selected and "on-line money payment" is selected as the accounting means. In accordance with this content, for example, the accounting processing executing means for performing the accounting fee performs the accounting processing.

[0094] FIG. 25 is a flowchart for a service provider 2501, a function manager 2502, and a charge processor 2503 according to an embodiment of the present invention. As shown in FIG. 25, a service capable of being provided by the service provider 2501 is held therein, which is associated with an identifier. For example, Identifier 01 is associated with a "live broadcast of a baseball game," Identifier 02 is associated with "news for 24 hours a day," and Identifier 03 is associated with "information on traffic jam." If the function manager selects Identifier 01, the service of a "live broadcast of a baseball game" is provided to the user via an electronic appliance. On the other hand, the information, indicating that the service identified by Identifier 01 is being provided, is passed onto the charge processor 2503. The charge processor 2503 as a means for selecting a charging method holds the charge amount and the means for charging, which are respectively associated with the identifier. On account of the provided service identified by Identifier 01, 50 Yen as a charge amount for example is selected, and "on-line payment" is selected as a means for charging. In accordance with this information, the means for executing charge processing carries out charge processing therein.

[0095] ~~Next, a case that the accounting processing system collects the user usage status data which is information on the usage status of the electronic appliance by the user will be explained below. FIG. 26 illustrates an example of a function block according to this embodiment. As shown in FIG. 26, this accounting processing system 2600 has a usage information collecting unit 2602 in addition to a service offering function 2601, a function managing unit 2603 and an accounting processing unit 2604. The usage information collecting unit 2602 collects the user usage status data which is information on the usage status of the user from the electronic appliance. In this case, the "user usage status data" means the information on the usage of the electronic appliance by the user. For example, it includes the information on the content, the time and the quality such as the information on the usage status of the electronic appliance itself, the information on the usage status of the content through the electronic appliance and the information on the distribution of the program through the electronic appliance and the like. This user usage status data is used for the accounting processing by the accounting processing unit 2604. In other words, the accounting processing system has the usage information collecting unit 2602 for collecting this usage status data. Further, the accounting processing system selects the accounting method according to the user usage status data which is collected by the usage information collecting unit 2602.~~

[0095] Below is described an embodiment of a charge processing system, which collects the use status data of a user, which is information relating to the use status of an electronic appliance by a user. FIG. 26 is a functional block diagram of an embodiment according to the present invention. As shown in FIG. 26, the charge processing system 2600 comprises a collector 2602 for information relating to use, in addition to a service function 2601, a function manager 2603, and a charge processor 2604. The collector 2602 for information relating to use collects the use status data of a user, which is information relating to the use status of a user from an electronic appliance. In this case, the use status data includes information relating to the use of an electronic appliance by a user. For example, it includes information relating to the content, time, and quality, such as information relating to the use status of the electronic appliance in itself, information relating to the use status of the content via an electronic appliance, and information relating to the distribution of a program via an electronic appliance. The use status data of a user is used for

charge processing by the charge processor 2604. In other words, the charge processing system is equipped with a collector 2602 for information relating to use, which collects this use status data. Moreover, the charge processing system selects the charging method according to the use status data of a user, which is collected by the collector 2602 for information relating to use.

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~~[0096] FIG. 27 shows a flow of the processing in a function managing unit 2701, a usage information collecting unit 2702 and accounting method selection means 2703 according to this embodiment. For example, it is assumed that "01" is passed to the accounting method selection means 2703 from the function managing unit 2701 as the identifier of the service function. Additionally, it is assumed that the information indicating that the service of this identifier "01" has been used for 90 minutes is passed to the accounting method selection means 2703 from the usage information collecting unit 2702 as the user usage status data. Therefore, for example, in the accounting method selection means in the accounting method selection means 2703, a basic accounting amount within one hour is defined as "50 yen" with respect to the identifier "01". In the same way, the accounting means is held as "on-line money payment" with respect to the identifier "01". Further, the information indicating that "1 yen per minute" is added as an additional accounting fee for offering the service more than one hour is held with respect to the identifier "01". On the basis of these, the accounting method is selected. The accounting method includes the information necessary for processing the accounting such as the accounting amount or the like in addition to the accounting means. Upon determining this additional accounting amount, the user usage status data of "used for 90 minutes", which is collected by the usage information collecting unit 2702 is used. In other words, the additional accounting fee is charged for 30 minutes, i.e., overused time more than one hour as a time affordable by the basic amount of "50 yen", so that the additional amount is calculated as 30 minutes.times.1 yen=30 yen. On the basis of the processing of the accounting method selection means as described above, the accounting processing executing means executes the on-line money payment by determining that the accounting amount is 80 yen.~~

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[0096] FIG. 27 is a flowchart for a function manager 2701, a collector 2702 for information relating to use, and a means 2703 for selecting a charging method according to an embodiment of

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the present invention. For example, it is assumed that Identifier 01, as an identifier of a service function, is passed onto the means 2703 for selecting a charging method from the function manager 2701. Moreover, it is assumed that the information as use status data of a user, indicating that the service of Identifier 01 has been used for 90 minutes, is passed onto the means 5 2703 for selecting a charging method from the collector 2702 for information relating to use. As an example, in the means 2703 for selecting a charging method, the amount for the basic charge for one hour is set to 50 Yen in respect to Identifier 01. In the same way, the means for charging is held as "on-line payment" in respect to Identifier 01. Moreover, the information, indicating that 1 Yen per minute is added as an additional charge after one hour of service, is held in respect to 10 Identifier 01. On the basis of these factors, the charging method is selected therein. The information for the charging method includes information necessary for charge processing, such as the charge amount, in addition to the means of charging. Upon determining this additional charge amount, the embodiment uses the use status data of a user ("service used for 90 minutes") which is collected by the collector 2702 for information relating to use. In other words, the 15 additional charge is for 30 minutes, i.e., the time period of use over the basic time period of one hour (the basic charge of 50 Yen), so that the additional amount is calculated as follows: 30 minutes x 1 Yen = 30 Yen. On the basis of the operation of the means for selecting a charging method as described above, the means for executing charge processing executes on-line payment with the charge amount of 80 Yen.

20 [0097] Next, a case that the user function usage status data which is information on the usage status of the user for each function of the electronic appliance is collected will be explained.

[0097] Below is described an embodiment according to the present invention, which collects 25 the use status data of a function in respect to a user, which is information relating to the use status of a user for each function of an electronic appliance.

[0098] FIG. 28 illustrates an example of a functional block of an accounting processing system according to this embodiment. As shown in FIG. 28, this accounting processing system 2800 has 30 a function usage information collecting unit 2802 in addition to a service offering function 2801,

~~a function managing unit 2803 and an accounting processing unit 2804. The function usage information collecting unit 2802 collects the user function usage status data which is information on the usage status of the user for each function of the electronic appliance. Therefore, the usage status data of the user is the functional data belonged to the electronic appliance. These functions of the electronic appliance serve to realize the services, respectively. For example, they include a function enabling the voice in the foreign language to be listened, a function for slowly reproducing a moving image and a function for recording the broadcast and the like. Further, according to the user function usage status data which is collected by the function usage information collecting unit 2802, the accounting method is selected. For example, the functions to be realized by the electronic appliance are offered by a specific service provider, respectively, so that it is necessary for the user to pay the fee to the service provider who provides the function when the user uses each function. Therefore, by using the user function usage status data according to this embodiment, the accounting fee for every usage of the function can be charged.~~

[0098] FIG. 28 is a functional block diagram of an embodiment of a charge processing system according to the present invention. As shown in FIG. 28, the charge processing system 2800 comprises a collector 2802 for information relating to the use of a function, in addition to a service function 2801, a function manager 2803, and a charge processor 2804. The collector 2802 for information relating to the use of a function collects the use status data of a function in respect to a user, which is information relating to the use status of a user for each function of an electronic appliance. Accordingly, the use status data of a user is the data relating to a function in respect to an electronic appliance. A function (or functions) of an electronic appliance serves to implement various types of services. For example, there may be a function enabling a foreign language audio channel, a function for slow motion, and a function for broadcast recording. Moreover, according to the use status data of a function in respect to a user, which is collected by the collector 2802 for information relating to the use of a function, the charging method is selected thereby. For example, the function to be realized by an electronic appliance is provided by a specific service provider so that it is necessary for the user to pay a charge to said service provider for using said function. Therefore, by using the use status data of a function in respect to a user according to the embodiment, the charge per use of a function can be executed therein.

[0099] FIG. 29 shows a flow of the processing of a function managing unit 2901, a function usage information collecting unit 2902 and accounting processing unit 2903 according to an accounting processing system of this embodiment. As shown in FIG. 29, for example, it is assumed that the identifier "01" of the service which is offered to the user through the electronic appliance is passed to the accounting processing unit of the accounting processing unit 2903. On one hand, it is assumed that the function usage information collecting unit 2902 collects the information indicating that the function of "broadcast in English" corresponding to the identifier "L01" is used upon receiving the service, which is identified by the used function identifier of "01" and this information is passed to the accounting processing unit 2903. Therefore, in the accounting processing unit 2903, the basic accounting fee amount is selected as "50 yen" and the accounting means is selected as "on-line money payment" with respect to the service identified by this "01". On the other hand, the function accounting fee amount is selected as "20 yen" on the basis of the function identifier as "L01" which is collected by the function usage information collecting unit 2902. According to the selection of these accounting methods, the accounting processing executing means executes all or a part of the processing with the accounting amount of "50 yen+20 yen" and the accounting means of "on-line money payment".

[0099] FIG. 29 is a flowchart for a function manager 2901, a collector 2902 for information relating to the use of a function, and a charge processor 2903 according to the charge processing system of an embodiment of the present invention. As shown in FIG. 29, for example, it is assumed that Identifier 01 of the service provided to a user via an electronic appliance is passed onto the charge processor 2903. On one hand, it is assumed that the collector 2902 for information relating to the use of a function collects the information, indicating that the function of "broadcast in English" corresponding to Identifier L01 is being used upon receiving the service, which in turn is identified by Function Identifier 01; and this information is passed onto the charge processor 2903. Accordingly, in the charge processor 2903, the amount for the basic charge is selected as 50 Yen for example, and the means for charging is selected as "online payment" in respect to the service identified by "01." On the other hand, the amount for the charge for the function is selected as 20 Yen on the basis of Function Identifier L01, which is collected by the collector 2902 for information relating to the use of a function. According to the

selection of the charging method, the means for executing charge processing carries out execution in part or in whole with the charge amount of “50 Yen + 20 Yen,” and with the means for charging of “on-line payment.”

5 ~~[0100] Next, an accounting processing system to be used for the accounting processing by receiving the information on the setting status of the electronic appliance will be explained below. An object of this system is to provide a service and to enable the accounting processing according to the setting of the electronic appliance to be realized. For example, a manufacturer of the electronic appliance lends the electronic appliance to the user. Then, another service provider~~
10 ~~provides a service for the user of the lent electronic appliance. The user of the electronic appliance pays to the fee in compensation for this service and the service provider pay the manufacturer of the electronic appliance since the manufacturer offers the opportunity that the service provider can offer the service through the electronic appliance. According to this example, the service provider means a manager of the service to be offered through the electronic~~
15 ~~appliance. Further, the manufacturer of the electronic appliance is needed to have the accounting fee calculation means for this manager. The accounting processing system according to this embodiment is the optimum means as this accounting fee calculation means. Specifically, the accounting processing unit in the accounting processing system is most appropriate.~~

20 [0100] Below is described a charge processing system according to the present invention, which carries out charge processing by receiving information relating to the installation status of an electronic appliance. The objective of this system is to provide services to an electronic appliance while enabling charge processing according to the installation of said electronic appliance. For example, a manufacturer of an electronic appliance leases an electronic appliance to a user, and
25 another service provider provides services to the rental electronic appliance for the benefit of the user. The user of the electronic appliance pays a charge for the services, and the service provider in turn pays the manufacturer of the electronic appliance since the manufacturer in effect is supplying a basis on which the service provider can provide services to the user via the rental electronic appliance. In this example, a service provider may include an administrator of the
30 service provided via an electronic appliance. Further, the manufacturer of the electronic appliance

needs to have a means for computing the charge in respect to this administrator. The means for computing a charge in the charge processing system according to this embodiment is the optimum means for such purpose. In particular, the charge processor in the charge processing system is most appropriate for this purpose.

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~~[0101] FIG. 30 illustrates an example of a functional block of an accounting processing system according to this embodiment for specifically explaining an accounting processing unit. As shown in FIG. 30, the electronic appliance that is managed by this accounting processing system has electronic appliance number managing units 3001, 3002, 3003, 3004 and 3005 and holds the number of the electronic appliance. This number of the electronic appliance can uniquely identify the electronic appliance in all electronic appliances belonged to this accounting processing system. Further, the electronic appliance passes the electronic appliance setting status data as the information on the setting status of the electronic appliance itself to the accounting processing system with associating this data with this electronic appliance number. This setting status data includes the information indicating that the electronic appliance which is specified by at least corresponding electronic appliance number is available by the user. An accounting processing unit 3007 has a manager identification data managing unit 3006 for managing the manager identification data to identify the manager of the electronic appliance. That is because the object of the accounting is understood in a relation with the electronic appliance. For example, the accounting processing unit 3007 associates the manager identifier as the manager identification data with the electronic appliance number and owns them as a table.~~

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[0101] FIG. 30 is a functional block diagram of a charge processing system according to an embodiment of the present invention, which describes the charge processor in some detail. As shown in FIG. 30, an electronic appliance managed by a charge processing system comprises managers (3001, 3002, 3003, 3004 and 3005) for electronic appliance numbers, which hold these electronic appliance numbers. The electronic appliance number uniquely identifies an electronic appliance among all the electronic appliances belonging to the charge processing system. Further, the electronic appliance passes the installation status data of an electronic appliance as information relating to the installation status of the electronic appliance to the charge processing

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system while associating this data with the electronic appliance number. The installation status data includes information indicating that the electronic appliance specified by at least one corresponding electronic appliance number is available to the user. A charge processor 3007 comprises a manager 3006 for administrator identification data, each of which identifies the administrator of an electronic appliance. This is so because the object of charge (chargee) is understood in relation to the electronic appliance. The charge processor 3007 associates the administrator identifier (as administrator identification data) with the electronic appliance number, and holds them in a table.

~~[0102] The electronic appliance number data and the electronic appliance setting status data as the information on the setting status of the electronic appliance are received from the electronic appliance. Then, by using the table in which the electronic appliance number data is associated with the manager identification data, the accounting method according to the manager identification data is selected and by using the electronic appliance setting status, the accounting processing according to the respective electronic appliances is performed.~~

[0102] The electronic appliance number data, and the installation status data of an electronic appliance as information relating to the installation status of an electronic appliance are received from the electronic appliance. Then, by using the table in which the electronic appliance number data is associated with the administrator identification data, the charging method according to said administrator identification data is selected, and by using the installation status of the electronic appliance, the charge processing is carried out in respective to the electronic appliance.

~~[0103] Next, an accounting processing system to be used for the accounting processing by receiving the information on the embedding of the function of the electronic appliance will be explained below.~~

[0103] Below is described a charge processing system according to the present invention, which carries out charge processing by receiving information relating to the built-in function of an electronic appliance.

~~[0104] Although the accounting processing system according to the aforementioned embodiment performs the accounting processing on the basis of the information on the setting of the electric appliance, the accounting processing system according to this embodiment performs the accounting processing on the basis of the information on the embedding of the function of the electric appliance. Accordingly, the object of this embodiment is an "embedding of the function of the electric appliance" instead of the "setting of the electric appliance".~~

[0104] Although the charge processing system according to the aforementioned embodiment carries out charge processing on the basis of information relating to the installation of an electronic appliance, the charge processing system according to the embodiment as below carries out charge processing on the basis of information relating to the built-in function of an electronic appliance. Accordingly, the object of this embodiment is a built-in function of an electronic appliance, instead of its installation status.

~~[0105] FIG. 31 illustrates an example of a functional block of an accounting processing system according to this embodiment for specifically explaining an accounting processing unit. As shown in FIG. 31, the electric appliance has a sub-system for realizing a function and it has electronic appliance function identification data managing units 3101, 3102 and 3103 for each sub-system. Then, the electric appliance holds the electronic appliance function identification data for identifying respective sub-systems.~~

[0105] FIG. 31 is a functional block diagram of a charge processing system according to an embodiment of the present invention, which describes the charge processor therein in some detail. As shown in FIG. 31, an electronic appliance comprises a sub-system for implementing a function, and managers (3101, 3102 and 3103) for function identification data of an electronic appliance for each sub-system. The electronic appliance holds the function identification data of the electronic appliance, which identifies the respective sub-system thereof.

~~[0106] The electronic appliance transmits the information on the embedding of the function to the accounting processing system with being associated with the electronic appliance function~~

~~identification data. This information on the embedding of the function includes the information indicating that the function identified by at least corresponding electronic appliance function identification data is available by the user.~~

5 [0106] An electronic appliance transmits information relating to the built-in function to the charge processing system while associating it with the function identification data of the electronic appliance. The information relating to the built-in function includes information indicating that the function identified by at least one corresponding function identification data of the electronic appliance is available to the user.

10 ~~[0107] Further, an accounting processing unit 3105 is provided with a function manager identifier data managing unit 3104 for managing the function manager identification data to identify the manager of each function of the electronic appliance. The electronic appliance receives the electronic appliance function identification data and the function embedding data which is information on the embedding of the function, associates the electronic appliance function identification data with the function manager identification data, selects the accounting method according to the function manager identification data and performs the accounting processing by using the electronic appliance function identification data.~~

20 [0107] Moreover, a charge processor 3105 is equipped with a manager 3104 for function administrator identifier data, each of which identifies the administrator of the respective function of the electronic appliance. The electronic appliance receives the function identification data of the electronic appliance, and the built-in function data, which is information relating to the built-in function. The electronic appliance then associates the function identification data of the electronic appliance with the function administrator identification data; selects the charging method according to the function administrator identification data; and carries out charge processing by using the function identification data of the electronic appliance.

30 ~~[0108] As shown in FIG. 32, the accounting processing method for performing the accounting processing for the service to be realized by the electronic appliance comprises the steps of:~~

~~offering various services to the user (step S3201); managing various service offering functions belonged to the electronic appliance (step S3202); and selecting an appropriate accounting method according to the service offering function and performing the accounting process (step S3203), so that it is possible to appropriately perform the accounting processing to the service to be realized by the electronic appliance.~~

[0108] As shown in FIG. 32, the method for charge processing for services realized by an electronic appliance comprises the steps of: providing various types of services to a user (S3201); managing various types of service functions of an electronic appliance (S3202); and selecting an appropriate charging method according to the service function and carrying out charge processing thereby(S3203).

~~[0109] Further, an embodiment having a recording medium in which an accounting processing program for performing an accounting processing for a service to be realized by an electronic appliance is recorded, comprising the steps of offering various services to the user; managing various service offering functions belonged to the electronic appliance; and selecting an appropriate accounting method according to the service offering function and performing an accounting process can effectively perform the accounting processing for the service to be realized by the electronic appliance.~~

[0109] Moreover, an embodiment, having a recording medium encoded with a charge processing program for carrying out charge processing for services realized by an electronic appliance, comprises the steps of providing various types of services to a user; managing various types of service functions of an electronic appliance; and selecting an appropriate charging method according to the service function and carrying out charge processing thereby.

~~[0110] Furthermore, there is provided an accounting processing program for performing an accounting processing for a service to be realized by an electronic appliance, the program causing a computer to execute the steps of: offering various services to the user; managing various service offering functions belonged to the electronic appliance; and selecting an appropriate~~

accounting method according to the service offering function and performing an accounting process, which is also available for effectively performing the accounting processing.

[0110] Furthermore, provided is a charge processing program for carrying out charge processing for services realized by an electronic appliance, which causes a computer to execute the steps of: providing various types of services to a user; managing various types of service functions of an electronic appliance; selecting an appropriate charging method according to the service function and carrying out charge processing thereby.

~~[0111] According to the conventional accounting processing method, each service provider charges the accounting fee for each service. However, according to the present invention, even in the case of an interactive multimedia service terminal or the like for customizing a plurality of services for each service terminal, it is possible to easily perform many kinds of accounting processings with respect to one service terminal.~~

[0111] In the conventional method of charge processing, each service provider was required to carry out charge processing as per service so provided. However, according to the present invention, even in the case of an interactive multimedia service terminal, having customization a plurality of services per each service terminal, it is possible to easily carry out many types of charge processing in respect to one service terminal.

~~[0112] Additionally, in the case that a plurality of subjects such as a content provider, a communication agent and a device provider and the like cooperate to offer one service, it becomes possible to easily distribute the service fee income in compensation for the service for each service providing subject.~~

[0112] Moreover, even if the services are provided by a plurality of entities in cooperation, such as content providers, a common carrier, and device providers, the present invention enables easy distribution of profit of service charges derived from said services as per said service provider.

~~[0113] Further, it becomes possible for an advertiser to easily arrange a reproduction apparatus for a commercial message only, an exclusive function and a button in a home.~~

[0113] Moreover, the present invention enables easy installation of an exclusive playback device, a function or a button for commercials in a household environment.

~~[0114] Further, such an electronic appliance is lent free of charge as a service portal, so that the user who receives the service can enjoy the desirable service at a low cost. On the other hand, a person who lends the electronic appliance can develop his or her business by receiving the fee from the user who offers the service.~~

[0114] Moreover, by renting such electronic appliance free of charge from a service provider or portal, a user can enjoy the service which he or she only wants to receive at a low cost. On the other hand, the lender of such electronic appliance may proceed with other business development on the back of the revenue received from the lessee service provider as above.

ABSTRACT

~~An accounting processing method for a service that is realized by an electronic appliance. Specifically, the present invention relates to an accounting processing method for a partial usage of the electronic appliance such as a usage of a function, an operating button and an accumulation medium of the electronic appliance. An accounting processing method for a service to be realized by an electronic appliance includes the steps of: taking out a calculation formula from a calculation formula storage means for storing a calculation formula which calculates an accounting fee for the use of said electronic appliance; and calculating an accounting fee on the basis of said calculation formula which is taken out in said step.~~

The present invention relates to a method of charge processing for services realized by an electronic appliance. In particular, the present invention relates to a method of charge processing for partial use of an electronic appliance, i.e., use of a function, an operation button or a storage medium of an electronic appliance. A method of charge processing for services realized by an electronic appliance comprises the steps of: extracting a computation formula from a means for storing computation formulas, which computes the charge for the use of said electronic appliance; and computing the charge on the basis of said computation formula extracted in the above step.